Teaching at Carolina

A Handbook for Instructors

written and designed by the staff of
The Center for Teaching and Learning
University of North Carolina at Chapel Hill

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To be a successful teacher, you need to know something about the institution in which you teach and about the undergraduates who take your classes. This knowledge is particularly important if you come from out of state or another country. Every university has a unique history and special culture that can influence classroom teaching in subtle ways. Your students' academic and cultural backgrounds also directly affect aspects of instruction, so the more you know about them, the more effective you can be as a teacher.

The following profile is based on data from the 1990–1991 school year and is intended to provide a broad context for understanding UNC and its students. Your task as a teacher is to find out more specific information about the institution and your department and about the background, skills, interests, and needs of the students in your classes.

The University

The University of North Carolina at Chapel Hill is the flagship of the 16-campus university system. UNC was chartered in 1789 and opened its doors in 1795, making it the first state university to admit students. From one building, 41 students, and two professors, the University has grown to 162 major buildings, 23,852 students, and 1,900 full-time faculty teaching in more than 100 fields.

In addition to full-time faculty members, there are many lecturers, part-time faculty, and, in an average year, about 1,200 graduate teaching assistants. The University is composed of 14 colleges and schools with more than 70 departments, related centers, and institutes. These colleges and schools offer 67 Bachelor's, 88 Master's, and 61 Doctoral degrees, as well as professional degrees in dentistry, medicine, pharmacy and law. The University has two divisions: Academic Affairs and Health Affairs (see list below for schools in each division). Of the 1,900 full-time faculty, 46% are in Academic Affairs and 54% are in Health Affairs.

Academic Affairs
- College of Arts and Sciences
- School of Business Administration
- School of Education
- School of Information & Library Science
- School of Journalism
- School of Law
- School of Social Work

Health Affairs
- School of Dentistry
- School of Medicine
- School of Nursing
- School of Pharmacy
- School of Public Health

As with all research universities, UNC's reward system is based very heavily on measures of research productivity. However, the University also has a long tradition as a teaching institution. As a result, in many departments good teaching is assumed to be the goal (and the personal responsibility) of every faculty member or TA, without regard to extrinsic rewards. To reward outstanding teaching, the University, various philanthropists, and the student government have all funded teaching awards that carry both prestige and significant honoraria. Some schools and departments also make teaching awards.

Remember that UNC is a state university, and although it enjoys a national reputation for its leading research role, one of its missions is to educate the people of North Carolina. By law, at least 82% of UNC's total student body must be in-state, and currently the figure is closer to 84% in-state, which means that the vast majority of your students will be from North Carolina. Given UNC's national reputation, new faculty members and TAs from other states may have unrealistic expectations about the undergraduate population. When these expectations are not fulfilled, new teachers can become disillusioned and feel unprepared to teach effectively. Developing a more accurate picture of UNC students, their abilities, and their needs, will help you prepare for a successful teaching experience.

The Students

In fall semester 1990, there were 23,852 students enrolled at UNC. Approximately 65% (15,463) of these students were undergraduates, 27% were in graduate programs, and 7% were in professional programs. Almost all of the undergraduates enroll in programs in the Academic Affairs Division (13,848 students in 1990).

Among undergraduates, women outnumber men 59% to 41%. Approximately 85% of undergraduate students are white; 10% are black; 5% are Hispanic, Asian, American Indian or Alaskan natives. Eighty-four percent of the undergraduates come from North Carolina, representing every one of the 100 counties in the state. Although there are out-of-state students from most regions of the country, the majority come from states on the eastern seaboard. Students from foreign countries make up less than 1% of the undergraduates and over half of these students come from western Europe and Canada.

You can expect freshman students to have a wide range of academic abilities. Some students have very sophisticated academic backgrounds while others have only the basic skills required for enrollment at the University. Out-of-state students have higher SAT scores as a group than in-

state students. In 1990-91 the average SAT score for enrolled in-state students was just over 1120; for out-of-state students the average was 1293. In-state students generally come from the top 6-7% of their graduating class while out-of-state students come from the top 4-5%. The University received 15,172 undergraduate applications in 1990 (6,446 in-state, 8,726 out-of-state) and accepted 5,530. Of the in-state applications, 64.7% were accepted, but only 15.6% of the out-of-state applications were accepted. In the Fall, 1990, semester, 3,252 students enrolled: 2,649 in-state and 603 out-of-state students. It is obvious that out-of-state students have a much harder time getting into UNC than in-state students, and those who make it are generally very good students with strong academic backgrounds.

Between 55 and 60% of freshmen graduate in four years and between 70 and 75% will graduate in five years. Eventually, about 80% will complete their undergraduate degrees here. These graduation rates are higher than the average for major public research universities in the Southeast and compare favorably with national averages as well.

North Carolina

Since the vast majority of UNC's undergraduates are from North Carolina, you need to know something about the state to understand their background. North Carolina has a population of 6.5 million people, but there are only 10 cities with populations over 55,000 and only 5 cities with populations of over 100,000. The largest city, Charlotte, has over 395,000 people, but 245 towns have a population of 1,000 or less. For some students, their first class at UNC will have more people than their hometowns. Many students may have no experience with the kind of urban life that is common in the Northeast and little understanding of the culture and sociology of large cities.

North Carolina has a centralized public education system with a State Department of Public Instruction and a State Superintendent of Education. The state mandates a minimum standard course of study for both the core and elective curriculum in all public schools from kindergarten through 12th grade. For graduation, all high school students must earn twenty Carnegie Units, including four courses in English, two in math, two in social studies, two in science, one in physical education and health, and nine additional courses that are determined by the local school board. Students who expect to go to UNC-CH must also take a foreign language, college preparatory math, and three courses in science. Local school boards can go beyond the minimum curriculum set by the state and offer a variety of electives and advanced courses. North Carolina high schools, which vary greatly in size, also vary in the number of teachers with higher-level degrees, the number of Honors and Advanced Placement courses offered, and in the student-teacher ratio.

North Carolina has some innovative educational programs for public school students, including the School of the Arts, the School of Science and Math, and numerous special programs, but the state currently ranks 49th in SAT scores. And although the state ranks 12th in the nation in the amount of money it spends, per capita, on higher education, it is only 40th in per capita funding for elementary and secondary education.

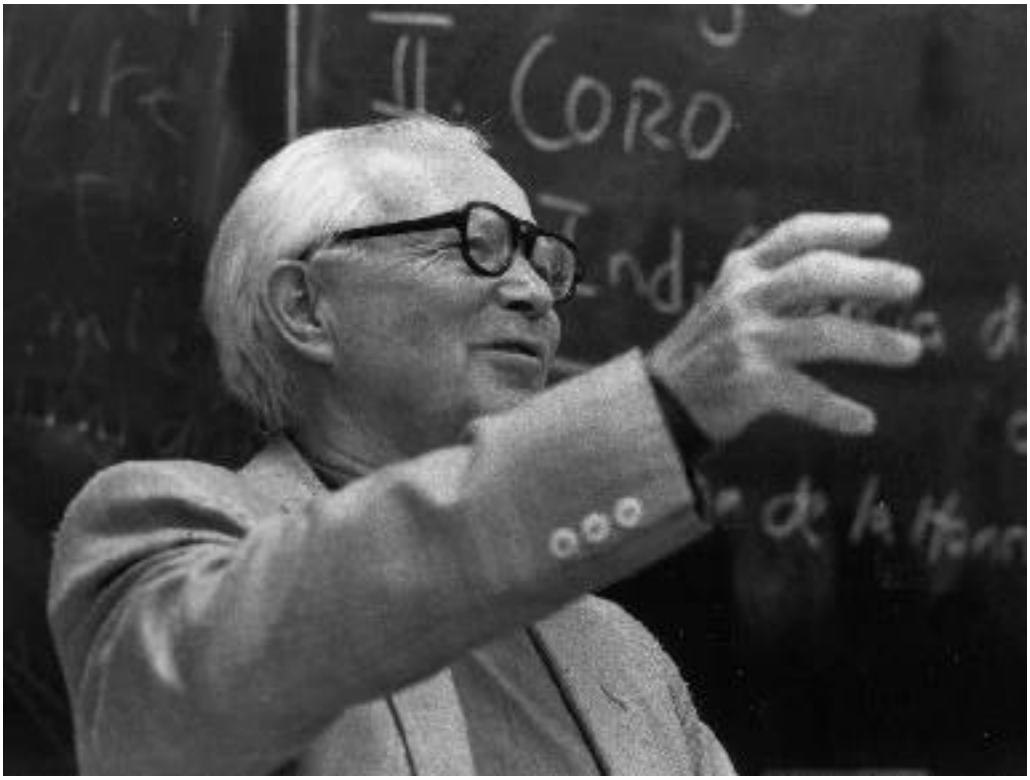
You can conclude from this picture of the state's public school system that most students at UNC have not had to face the competition and educational demands that would prepare them for work at a nationally ranked university, even though they are drawn from the top 6 to 7% of their high school graduating classes. Many students also lack experience in academic self-discipline, and most have had their planning imposed upon them. They are nonetheless quite capable of doing high-level work and will work hard if you let them know you have high expectations for their performance and if you provide them with sufficient structure and direction.

Many environmental factors can conspire to trap students into academic jeopardy. For the first time in their lives many of them will face the need to monitor and take responsibility for their own behavior, and they may be overwhelmed by the rich social and recreational life in Chapel Hill. As a university town, Chapel Hill has a cosmopolitan ambiance compared to many of the small towns and cities in which the majority of students grew up, and it affords many potential distractions. UNC's varsity sports program is a major source of

entertainment for undergraduates, and sports may preoccupy some of them to such an extent that their studies will suffer. The campus also has a very active fraternity and sorority system, which places additional demands on the attention of a substantial number of students. Finally, many undergraduates are the first members of their families to attend college, and because the experience is unique and UNC is so large, they can feel alienated or lost.

You should also be aware that approximately 30% of all undergraduates receive some type of financial aid, and many work part-time for their entire college careers. Although the majority of UNC students are middle-class, there are many from families of modest means. If a student is not performing well in a course, it may be because of a heavy work schedule rather than lack of skill or motivation to learn.

You will need to take all these factors into account as you teach and counsel students. Although you cannot (and should not) play the role of parent to your students, by learning as much as you can about them and taking an interest in them as individuals, you can educate them and help them to succeed as college students. There are a number of suggestions for learning about your students in the section called “The First Day of Class.”



Course Planning & Teaching

Planning and Design

Many college teachers use a simple, content-centered planning model. The operative planning questions are:

- How much of this content can I cover?
- How much time do I have to cover it?
- Should I emphasize breadth or depth of coverage?
- What materials will I need to teach the course?

This model provides no guidelines for selecting the content to be covered, and it is obviously impossible to include all the material that is relevant to a given course. Teachers often have difficulty with this problem, particularly in new courses, and one of the most common student complaints about college courses is that they try to cover too much material. This focus on content

can also lead to an emphasis on learning factual information rather than mastering higher-level thinking skills. Research has shown that retention of factual content beyond the final exam is minimal; most of it is lost within a few weeks. Of course, factual content that the student continues to use in other classes does tend to be retained, but this kind of repetition usually occurs only in the student's major. Think about undergraduate courses you took in fields unrelated to your current discipline and ask yourself how much factual content you can recall today.

By contrast, the planning model presented in this section focuses on the *student* rather than on the content. The operative planning questions are:

- In what ways will students be better thinkers when they finish the course?
- What should students be able to do with the knowledge and skills gained in the course?
- What portions of the content are germane to these learning goals?
- What kinds of tasks should students perform in order to achieve these goals?

This model addresses content mastery and the intellectual skills that students should have when they finish the course. It shifts the responsibility for learning back on the student because planning decisions are made on the basis of activities that students must perform. It also makes selection of material easier, since course goals dictate the content that will be included. Moreover, students tend to remember factual details longer if the facts are associated with higher-order thinking processes such as problem-solving, analysis, and critical thinking. This model can be applied to the design of any kind of instruction, from single lectures to entire curricula, and many teachers have reported that they have used it to improve their presentations at professional conferences.

How to Begin

It's best to start planning your course several months ahead of the semester in which it is taught. Good planning requires thought and reflection, and mundane details often require long lead times: ordering textbooks, requesting films, getting copyright clearance for duplicated materials, and typing and duplicating course handouts. But even if you are asked to teach a course on short notice, you should try to follow as many of the planning guidelines as possible.

Most faculty members and some teaching assistants are completely responsible for designing the courses they teach, but some departments require that certain courses follow guidelines that insure uniformity of instruction. If you are a TA, you may inherit a course that someone else has planned and taught. Even in cases where you must conform to a previous plan, you can still use these guidelines to modify the course to suit your interests and needs. It is certainly easier and less time-consuming to adapt a well-planned course than to develop one from scratch. Remember too, that no teacher—even the best—will create a great course on the first try. As a matter of fact, some instructors feel that you must teach a course at least three times before it really works well.

The Basic Planning Model

We have created a set of questions for you to consider at each stage of the course planning process. This list covers the most important elements of course design.

1. What is the place of this course in the curriculum? Is it a prerequisite for higher-level courses? If so, what do incoming students in these higher courses need to know? Is the course peripheral to the departmental curriculum? If so, what purpose is it supposed to serve? Where does the course fit in the overall education of the students? Answering these questions will help you define the course goals.

2. What kinds of skills and levels of knowledge can you expect of students who register for the class? What level of performance can you expect from them? It is helpful to talk to experienced faculty about the typical UNC undergraduate's capabilities and achievement level—for example, the average incoming freshmen reads at an eleventh-grade level.

3. Given their incoming skills and knowledge, how do you want students to "be different" by the end of the course? Specifically, what

skills and knowledge should they be able to demonstrate, and how will you measure their achievement of these goals? (In the next section, you will find a useful system for identifying goals and objectives, and subsequent sections provide tips on testing and grading.)

4. What themes, fundamental principles, or synthesizing ideas does the course involve? For example, a course in art history might have a particular approach to interpreting works of art that is used throughout; a course in anthropology could use ethnocentrism as a theme. These elements can serve as unifying themes for the entire body of material; they become the threads which hold the course together for the students.

5. What are the major instructional units into which the course naturally divides? If there are no natural divisions, what logical and convenient divisions can be imposed on the course? It is important to break material into chunks so that students can more easily assimilate it. Without some subdivisions, a course may be too complex for the average student to comprehend.

6. What kinds of learning experiences seem appropriate for students to master the course goals and objectives? What textbooks, monographs, or other reading materials are available, at what level are they written, and how closely do they match your conception of the course goals and objectives? (For further help, read the section entitled "Textbooks, Manuals, and Readings.") Are there films or videotapes that explain some topics better than you could in a lecture? Are there individuals whose expertise in certain areas would make them ideal guest speakers? Would your students learn some things better if they took a field trip to a local site? How will you involve students actively in their learning, both inside and outside of the classroom? (See the section on active learning strategies.)

7. How will you evaluate student achievement of objectives? Evaluation methods should be appropriate to the objectives and need to be planned when you design the course. (The section on testing and grading will help you make these kinds of decisions.)

Focus of the Course

Your answers to the first four questions above will help you determine the focus and outcomes of the course. In most math, science, language, and physical education courses, the outcomes are well-defined: students must be able to work certain kinds of problems, solve specific equations, read and speak a language at a particular level of mastery, or demonstrate certain physical skills. In these courses planning is simplified because the place of the course in the curriculum and the learning outcomes are generally agreed upon. On the other hand, departmental curricula may not be revised often enough to meet changes in the undergraduate population, and this may mean that course outcomes are inappropriate for the needs of current students.

By contrast, course goals in the social sciences and humanities are usually not as easily defined. What should students be able to do, to know, or to understand when they finish a survey course in history, music, art, anthropology, sociology, or philosophy? These courses require the teacher to think carefully about the meaning of these areas of knowledge for the lives and education of undergraduates. If they never take another course in your field, what would you want them to know about it? Of course, there is no single, objective answer to that question—not only will specialists in your field disagree, but the answer will vary from department to department and from institution to institution.

Defining goals and objectives is indispensable to course planning. For convenience, we will make a distinction between *goals*, which are general statements of the aims of the course, and *objectives*, which are more specific statements of the purposes of individual units or lessons. In writing goals and objectives, remember that they do not describe what the teacher is going to do; they describe what the students are going to learn. One way to focus planning on learning outcomes is to ask yourself how you want the students to be

different by the end of the course. Do you want them to have some of the skills that professionals in your field share, at least at a rudimentary level? Do you want them to be able to interpret phenomena in a special way? With what intellectual skills should they leave the course? You might also consider non-cognitive goals (How will the students' attitudes change over the course of the semester?), since attitudinal goals may be as important as cognitive goals in some courses.

Compare the two statements of course goals given below. Which statement provides more information to the students? Which one seems to be a clearer guide to the concepts covered in the course? Which one provides a better framework from which to plan the rest of the course?

Example A
Sociology 112—Social Stratification
The focus of this course is on contemporary social stratification in the United States. However, we will also cover the historical development of stratification, different theoretical perspectives on the origins of social equality, stratification in communist societies, and theories of world stratification.

Example B
Sociology 10—American Society
By the end of this course, you should be able to do the following:

1. Recognize and define the basic concepts of society and the ways in which sociologists use these concepts in constructing explanations for individual and group problems.
2. Explain how American institutions are maintained or changed by individuals or groups in society.
3. Analyze a selected number of American institutions using the basic concepts and theories of the sociological perspective.
4. Analyze selected past, present, and future problems of American institutions using the knowledge you have gained in 1, 2, and 3, above.

If you state your course goals in terms of student performance, as in Example B, you will have a much better foundation on which to build the course. You can then work backward from these goals to select material that is most appropriate for achieving them.

Course Themes

Some courses have themes, principles, or fundamental postulates that lend continuity and provide perspectives on the entire course. These themes will provide convenient intellectual pegs on which to hang concepts and other course material. In an Anthropology course, a teacher articulated several themes: the difference between nature and culture in Western thought; the relation between Western cultural values and other cultural values; the interaction between environment and culture and its effect on behavior.

The teacher referred to one or more of these themes in each class, providing students with a way to organize and discuss the course concepts. In some courses, a model of analysis can be used in the same way. The model is introduced at the beginning of the course and used throughout as students explore the content.

Planning for Instruction

The last three questions in the planning model above relate to the next stage of course design, which involves dividing the course into manageable pieces, choosing activities for each class, providing for quizzes and exams, and integrating these elements into a coherent whole. The major and minor divisions of the course should follow a logical order that can be easily grasped by students. The breaks between divisions provide natural points for quizzes and exams and allow students to synthesize course material in manageable pieces. Sometimes the textbook dictates the order and sequence of these divisions, as in some math, chemistry, or language courses. Courses that follow a linear historical survey will usually have natural breaks in the narrative, and courses that are organized topically can be divided by topic. It is wise to avoid using a textbook that presents material in a sequence that differs widely from your course plan, but if you must use such a book,

provide careful instructions for students to minimize confusion. Starting with major instructional units, decide how many days to devote to each one, and list the readings associated with each unit. Once you have worked out the larger units, divide them into individual class sessions.

Once you have decided on the major and minor divisions, you can block out the semester's activities. You will need an official university calendar for the semester in which you will be teaching. If you don't receive one in the mail, check with your department secretary for a copy. The calendar specifies the first and last class days and final exam days, indicates holidays and other events that might affect class schedules, and specifies deadlines for drop-add, grade reports, and similar items. Try to avoid having sessions on related material span major holidays. Remember, too, that major exams will take entire class periods to administer, and it is a good idea not to schedule them for the day before or the day after a major calendar break. Most teachers try to give some kind of test or graded assignment before the drop-add deadline, which is six weeks from the start of the semester, so students can drop the class if they are not doing well. If you count the number of hours that you will actually be in the classroom, you will probably find that the total is less than 40. In other words, you must teach the entire course in what amounts to a single standard work-week.

When you have blocked out the course and are satisfied that its parts are well-integrated, you will be ready to consider the objectives for each class period. Think of each class as having three elements: objectives, methods, and evaluation. It is helpful to create a table for each class as in Figure 1, to plan for each of these elements. This procedure pre-empts the impulse to sit down and auto-

Instructional Planning Chart

Figure 1

Lesson on Stratification and Social Mobility

Objectives	Teaching Methods	Evaluation
Students will be able to: Explain social stratification, including its measurement in a given situation. Compare and contrast the arguments concerning the inevitability of stratification. Discuss and evaluate a given social policy from the standpoint of the sociology of stratification. Describe and identify the Functionalist and Conflict approaches to stratification.	*Before class* Answer questions in study guide handout, based on the reading assignment in chapters 12 and 13 of the textbook. *In class* Fifteen minute mini-lecture on the four systems of stratification. Twenty-minute class discussion on U.S. social policies designed to reduce poverty (based on questions in study guide and readings for today's class). Five-minute summary of important issues raised in the discussion. Two student presentations to compare and contrast Marx's and Weber's view of class. (20 min.) Fifteen minute mini-lecture on Functionalist and Conflict approaches to stratification.	Essay questions on Mid-term: the four systems of social stratification, comparison of Marxian and Weberian views on class, comparison of Functionalist and Conflict approaches. Short quiz next class on elements of U.S. social policy raised in class discussions.

matically write lectures for each class session. Some course material may be appropriately taught via lectures, but if you consider the objectives for the day, you may decide that class discussion (or a formal debate or homework assignment) would be a more appropriate and effective method. You can then write "class discussion" under the methods column and make notes about how to prepare students for the discussion and how you might conduct the exercise. You may decide that students will need several different activities to master the objectives. For example, a short lecture might be followed by an in-class writing assignment, a guided discussion on the reading, followed by a short summarization lecture at the end of class. (Assigned readings and homework exercises can be used to get students to master some objectives outside of class—remember, class time is limited and very precious.)

The taxonomy in Figure 2 is useful for this stage of planning because it provides clear distinctions between lower and higher levels of learning. We include the taxonomy here because it will help you select the outcomes you desire. Don't worry about whether a particular objective falls under application or analysis, just use the list as a guide for your planning. For example, if you find that most of your objectives fall in the lower end of the taxonomy, ask yourself whether some higher-level objectives might also be appropriate. In the content-centered method of course planning, teachers tend to emphasize recall and comprehension, but most teachers would prefer to emphasize the upper levels (synthesis and evaluation). There are other systems for classifying learning outcomes, but this one has been used in psychology and education for many years, and it is simple and easy to understand.

The sample objectives in Figure 1 are stated in such a way that their evaluation is clearly implied. On your planning chart, the evaluation column is for notes about the specific kind of evaluation you will use for each objective. For example, you may decide that some measurement of class participation is an appropriate evaluation of an objective, or you may sketch out a short quiz or list of possible essay questions for a major exam. Whatever form the evaluation takes, it should clearly measure the objectives for the session.

This planning format helps you focus classroom activities on specific learning outcomes, to entertain a variety of instructional strategies, and to consider appropriate methods of evaluation at the initial planning stage (rather than after you have taught the material). This format can also be applied to planning a single lecture, demonstration, or other individual unit of instruction.

As you look over your work at this point, check the "flow" of the course. For example, be sure that sections of the course fit together well and that you have provided ways for your students to understand these connections. Short lectures are useful for providing an overview of an upcoming unit, and they can be supplemented by short class exercises in which you ask the students to look over the next unit and identify the connections between the new material and previous units.

This is also a good time to check the length and sequence of readings and how they relate to class activities. If you simply lecture on the reading assignments, students quickly learn that they don't need to come to class or that they don't need to do the reading. On the other hand, if you fail to relate reading material to class activities, students will be confused about the importance and relevance of the readings. Reading material should be illuminated in class so that students understand the context of the material and perceive its relationship to the course. Exercises that require students to use material from the reading can be very effective for this kind of integration. You can tell you haven't succeeded in this regard when students ask questions such as "How much of this reading will be on the exam?," "Do you just want us to get the general point from the reading or do you want us to memorize facts?," or "Do I need to read it for class on the assigned day or just before the exam?" You should also ask yourself how well you have clarified relationships among other course activities—written exercises, exams and quizzes, homework assignments, topical discussions, or lectures. A well-designed course is a carefully crafted network of ideas. Students should not have to guess why they are reading a particular book or writing a particular paper; nor should they waste time or suffer needless anxiety trying to fathom the instructor's intentions.

Taxonomy of Educational Objectives

Figure 2

1. Knowledge: The recall of specifics and universals, involving little more than bringing to mind the appropriate material.
   Examples:
   a. Define the term "short term memory."
   b. Identify the five major Prophets of the Old Testament.
   c. Who won the battle of Waterloo?
   d. Write the equation for the Ideal Gas Law.
   e. What are the five sections of a research report?
   f. List the characteristics peculiar to the Cubist movement.
   g. What are gram-positive bacteria?

2. Comprehension: The ability to process knowledge on a low level such that the knowledge can be reproduced or communicated without verbatim repetition.
   Examples:
   a. From a "story problem" description, set up the mathematical manipulation needed to solve the problem.
   b. Describe in prose what is shown in graph form.
   c. In one sentence give the point of a written passage.
   d. From a blueprint describe the article depicted.
   e. Given an experimental paradigm, state the question to be asked.
   f. Translate the following paragraph from *Der Spiegel* into good English.

3. Application: The use of abstractions in concrete situations.
   Examples:
   a. Relate the principle of reinforcement to classroom interactions.
   b. Describe an experiment to answer the question of the effects of weight on the fall of an object.
   c. Determine the centroid of a plane figure.
   d. Write a short poem in iambic pentameter.
   e. Train a rat to press a bar.
   f. Apply shading to produce depth in a drawing.
   g. Reduce the following circuit by Thevenin's theorem and find the current.

4. Analysis: The breakdown of a situation into its component parts.
   Examples:
   a. Identify the assumptions underlying a geometric proof.
   b. Given an argument for the abolition of guns, enumerate the positive and negative points presented.
   c. Analyze the following oscillator circuit and determine the frequency of oscillation.
   d. Given a research design, identify the predictor and criterion variables and the constraints on external and internal validity.
   e. Evaluate the reliability of the following vapor-liquid equilibrium data using the Gibbs-Duhem equation.

5. Synthesis: The putting together of elements and parts to form a whole.
   Examples:
   a. Write a logically organized argument in favor of a given position.
   b. Given a set of data derive a hypothesis to explain them.
   c. Given two opposing theories design an experiment to compare them.
   d. Design an overhead condenser for a distillation column which will condense 75.0 percent of the vapor. Specify number and size of tubes, flow rate of cooling water required, and control equipment for maintaining necessary pressure in shell-side of container.
   e. Construct an original work which incorporates five common materials in sculpture.
   f. Write a short story relating a personal experience in the style of a picaresque novel.

6. Evaluation: The making of judgments about the value of material/methods.
   Examples:
   a. Given an argument on any position, enumerate the logical fallacies in that argument.
   b. Given the data available on a research question, take a position and defend it.
   c. Given any research study, evaluate the appropriateness of the conclusions reached based on the data presented.
   d. In a given clinical situation, select the most reasonable intervention and predict the main effects and possible side effects.
   e. Evaluate a work of art, giving reasons in your evaluation.
   f. On the basis of operating data for the past six months, decide whether the company should buy steel used in our manufacturing process from Company A or Company B.

From Svinicki, M. (n.d.). *Handbook for new faculty*. Austin, TX: Center for Teaching Effectiveness, University of Texas at Austin. Based on Bloom, B. (Ed.). (1956). *Taxonomy of educational objectives*. New York: David McKay.

Now that you have read about the process of course development, you can decide how much of it you can use in your teaching situation. Sometimes faculty members and TAs are assigned courses at the last minute and don't have much time for planning, but if you find yourself in this situation you can still use elements of the planning model. For example, you might work on course units that occur late in the semester, or as you teach, make notes about how you will alter the course in subsequent semesters.

Textbooks, Manuals, and Readings

In most college courses, readings carry the burden of conveying content, hence they are central to the educational experience of your students. Read all material you assign your students, to judge relevance and identify potential problems of interpretation or elements of controversy. In grading essay tests, you must be familiar with the sources on which they are based, whether these sources contradict one another, and whether they contain errors of fact or interpretation. For the same reasons, it is important to read the course materials if you are a discussion leader, lab assistant, or grader, even though you have not had a hand in choosing the readings. The most important considerations in choosing reading materials are: reading level, readability, content, cost, and number of pages per week.

If you must use a textbook someone else has selected, subject it to the analysis outlined below to determine its suitability. You may have to make up deficiencies, interpret difficult material, select additional reading material, or supplement the book in other ways.

Reading Level

On average, UNC undergraduates enter the University reading at approximately the eleventh-grade level, which means that they may not be able to handle the level and amount of reading material you assign. You can expect more of juniors and seniors, of course, and even freshmen need to be challenged by their reading. After all, nothing can replace the experience of reading original works. The danger lies in setting challenges so far beyond students' capabilities that they are overwhelmed. Publishers' representatives can provide information on the reading level of texts they sell, and colleagues in your department can tell you which texts and materials they have used successfully.

Readability

Determining readability requires that you read the material yourself. If you are choosing a textbook, evaluate the author's approach to the subject, layout of the chapters, and its pedagogical features. With regard to content, the book should be correct, precise, and accurate (the same criteria applies to all monographic materials). Look for clear explanations of complex ideas and for a variety of concrete examples to illustrate concepts. Check for logical organization within chapters and throughout the book. Chapters or units must be of manageable length for students to master in the time allowed, and should have pedagogical features which will help them read and understand the content: chapter outlines, summaries, thought questions, lists of important terms and definitions, colored or boldfaced type for significant content, and so forth.

Content

Sometimes publishers sell student workbooks to accompany the textbook, and these can be useful if they contain exercises and assignments that correspond to your objectives for the course (don't automatically assume the workbook is a good idea—examine it as critically as the textbook).

You should also be cautious about using the teacher's edition of the textbook or the teacher's manual that may accompany the book. It is easy to be seduced into teaching a course from the textbook author's viewpoint rather than from your own (which is why textbook selection should follow, rather than precede, the selection of your course objectives). Beware, too, of the convenient lists of multiple-choice questions in the teacher's manual—many of them violate the principles of good test construction (see the teaching techniques section of this handbook for guidelines on using multiple-choice tests). These questions can serve as starting points for writing your own, but resist the temptation to use them wholesale.

Amount of Reading

The amount of reading you can require of your students depends upon several factors. Freshmen are not as capable of handling a heavy reading load as upperclassmen, and care should be taken to adjust the amount of reading, or the time allowed for completion, when the required material is extremely challenging (even for upperclassmen). Remember, too, that undergraduates usually take four or five courses per semester, and assigning a disproportionate amount of reading for one course may make it difficult for them to get all their coursework done. Once again, teachers in your department can provide advice in this regard. Ask several of them, however, because there may be disagreement about how much is reasonable.

Cost

If a textbook meets all your criteria but costs $75.00, consider the cost-benefit ratio for your students (similarly, a monograph and a half-dozen paperbacks may cost a considerable amount). Students taking four or five classes may be paying hundreds of dollars for their books alone. Although there are wealthy students at UNC, they are in the minority, and the average student is painfully aware of the cost of books. Some will even try to do without a book if they think its cost is exorbitant. Moreover, most students do not keep their textbooks for life. They are unlikely to get even a third of the price they paid when they sell the books back to Student Stores. One way to reduce costs for your students is to place materials on reserve at the Undergraduate Library.

Alternatives

If you discover that no single text or set of monographs meets your needs, you may wish to create your own textbook from different sources (assuming you have sufficient lead time). Local copy centers will provide forms for requesting copyright clearance, which is legally necessary for copying journal articles, chapters from books, and various other printed sources. These anthologies usually cost a great deal less than textbooks, and can be tailor-made to meet your course objectives. Of course, you need to consider the difficulty level of the individual articles you have chosen to include in the anthology. It is also a good idea to write an introduction for each article to provide some context for the readings. The best teachers also include sets of questions for students to answer as they read the articles.

Lab Manuals

If you teach a class in one of the natural sciences that requires a laboratory section, carefully examine the lab manual. Some manuals consist of little more than one or two typewritten pages for each exercise, with crude drawings of the apparatus, sold as a package through a local copy center. Others may be lengthy, expensively printed books, with pictures of materials and apparatus not available in your laboratory. Even when the manual is well-produced and appropriate for the experiments, it may not match information contained in the course textbook and you will need to make adjustments and corrections when you teach that material. If you are a lab TA in a large department, you may have to overcome problems and deficiencies in the lab manual by yourself. TAs who have taught the same labs in the past are an excellent source of information.

Developing a Syllabus

The syllabus is the end-product of your course planning activity, and it is written primarily—though not exclusively—for your students. The major purpose of a syllabus is to provide a map to help students navigate the course successfully. Research has shown that students who are told what they are supposed to learn and how they are to be evaluated perform better than those who are not so instructed. The course syllabus is an excellent medium for providing this information. A professor once pointed out that there seemed to be an inverse relationship between the length of her syllabus and the length of the line at her office door—if she put more information in the syllabus, fewer students troubled her with elementary questions about the organization of the course (and she had more time to consult with students about more significant questions). Moreover, a syllabus can point out connections between various parts of the course and therefore help students understand the course as an integrated whole.

A syllabus is also a kind of contract between you and your students. It specifies the duties and responsibilities of both parties and clearly states the benefits they are to derive from the experience. Once you have decided upon the rules, procedures, and requirements for the course and articulated them in your syllabus (and reviewed them in class), you should never arbitrarily change these requirements—it is the equivalent of unilaterally changing a legal contract after it has been signed. Students will be justifiably indignant if you change the rules in the middle of the game.

The syllabus is an important document for teachers and students, since it is one of the few tangible records of the course. It provides an account of your activities and it reflects your conceptualization of the course as a whole. If you are a TA, syllabi for courses you have taught may be important for job applications. At some institutions, course syllabi become part of your personnel file.

Although every syllabus is unique to the course it represents, you should strive for a syllabus that provides a complete picture of the course. The following list will help you create that kind of picture for your students.

Basic Information

1. Name of the instructor, names of teaching assistants, office location, office hours, and telephone number. Also, the specific circumstances under which students have permission to call you at home.

2. Title of the course, course number, semester, and year.

3. Building and room in which the class meets; days and hours of class meetings.

Course Description

1. Statement of course goals (written in terms of what the students will gain from the course).

2. The teaching methods and strategies you will use and their implications for students.

3. A detailed explanation of course procedures for papers, homework assignments, other outside activities, lab work, field trips, etc.

4. All required texts, readings, workbooks; other materials they will need for the course (e.g., dissecting kits, calculators).

5. Grading procedures and scales. List the activities that will be graded (e.g. projects, quizzes, exams, homework, papers, lab work, class participation), how each will be graded, and the percentage of the grade each one represents. Also explain the procedures by which you will determine the final grade.

6. An explanation of the types of questions you will use in quizzes and exams. Some teachers append examples of test questions from previous semesters. If you intend to use unannounced quizzes, you should tell students about them in this section.

7. Policies about class absence, lateness, missed exams, late papers, cheating, and plagiarism. For example, clearly delineate the types of source materials and the extent of collaboration permitted on homework and other assignments. Try to avoid a scolding tone in this section, but be specific and firm. You will find important information about the Honor Code and the specific responsibilities of student and teacher in a subsequent chapter of this handbook.

8. Strategies for success in the course. If you were a student in this class, how would you approach the course? What pitfalls can you warn the student against? How would you prepare for the quizzes and exams? How would you budget your time? What would your note-taking strategy be? Many undergraduates have poor study skills, and anything you can teach them about how to study and learn will improve their performance.

9. The schedule of classes, with meeting dates, topics, and appropriate readings; deadlines for papers, projects, and assignments; school holidays; and test dates.

Additional Material

If duplicating charges are a problem in your department, you can make this material available for purchase at a local copy center.

1. Guidelines for writing reports, research papers, reviews, etc. These guidelines should include the preferred format for each assignment, advice on how to research and write papers, and the criteria which will be used to grade them.
2. Handouts and readings.
3. Examples of test questions.
4. Samples of written assignments.

Although you may feel that a syllabus of this length is excessive, you will discover that students appreciate the effort you make in creating a truly useful syllabus. Take time to review it on the first day of class and refer to it from time to time during the course so that students will understand its importance in the course.

Ask other teachers for copies of their syllabi. Although your syllabus should express your own teaching goals for the course, there is no need to reinvent the wheel. Those who have taught the course before have had to solve many of the same problems, and their solutions can provide a rich source of ideas for your own syllabus.

The staff of the Center for Teaching and Learning is available for consultation on all aspects of course planning, from conceptualization of the course to writing the syllabus, so please call on us if you have questions.

Teaching Techniques

In the section on planning and design, you were encouraged to think of ways for students to achieve the objectives of the course and to free yourself from thinking exclusively of lecturing as a teaching method. In this section we will survey the appropriate uses of the lecture, briefly examine some alternative teaching methods, and suggest ways to organize the class period.

Learning Styles

The selection of teaching methods and strategies must be based, to some extent, on your own teaching preferences and unique style. Remember, however, that students learn in many different ways, and some research suggests that their learning preferences are substantively different from those of the faculty. For example, some students learn best when they have an opportunity for give-and-take with the teacher; others prefer to learn primarily through reading and lectures; and some students learn best on their own, by performing tasks related to the course material. There are many learning preferences and combinations of preferences, and the best teachers apply a variety of methods to tap the learning potential of a wide range of students. You can vary your class routine period by period, lecturing one day, holding discussions the next, showing a film the next, and so on, but varying methods within a class period is a better technique because it promotes greater interest and excitement.

There are many books on college teaching that provide detailed advice on a wide variety of teaching techniques (see the reading list at the end of this chapter). In this survey we will focus on the methods most widely used in higher education—lecture and discussion—and outline several other methods that you can explore on your own.

Lecturing

The traditional fifty-minute college lecture in which the teacher does all the talking is an ancient teaching method, but its survival into the twentieth century attests more to its ease of use—and low expense—than to its effectiveness as a teaching tool. When they are done well, lectures can be informative and even inspirational, but when they are done poorly, confusion and boredom result. Since it is likely that the lecture will remain the dominant teaching method in higher education for the forseeable future, you should be aware of its advantages and limitations.

The traditional lecture format suffers from a variety of handicaps. First, higher-level objectives such as analysis or critical thinking, cannot be taught in a lecture. Students cannot learn these skills unless they have an opportunity to practice them; listening to a lecture about critical thinking or problem-solving is simply not sufficient.

Second, the average attention span of a passive listener is about fifteen minutes, so if you talk

uninterruptedly for longer than fifteen minutes it is unlikely that your students will stay "tuned in." The only sure way to overcome this problem is to switch to some kind of activity in which students are directly involved.

Third, in the aural learning process students gradually transfer bits of information from short-term into long-term memory, a process that takes time and usually requires repetition of the material. Teachers therefore need to build "blank time" into lectures—periods in which no new information is being presented to interrupt the encoding process. If you present fifty minutes of new information (and remember, most of the content will be new to undergraduates) your students cannot process it all in a meaningful way. To allow time for encoding, after you introduce a new concept, provide ancillary information, anecdotes, and illustrations that elaborate on the concept.

Fourth, since human perception is subject to error and interference, what your students heard (and think they understood) is not necessarily what you said—as an occasional peek at their class notes will undoubtedly confirm. Unless you carry on a dialogue with students, you can't know the nature of their perceptions or misperceptions.

Fifth, students need help discriminating between important and less important material in lectures. You should provide frequent verbal and physical cues during the lecture—for example, walking between the first rows of students and stating in a raised voice, "These three points are vital." Good lecturers also write outlines of their main points on the blackboard, or distribute outlines of the lecture at the beginning of class.

Finally, another problem with lecturing is that it reinforces the impression that the teacher is the font of all knowledge, that truth exists and resides in the instructor. Teachers often decry the tendency of undergraduates to believe that there are Right Answers to everything, but lectures often reinforce this impression by presenting the material as a polished and complete package. A skillful lecturer works to overcome this impression by writing lectures that raise as many questions as they answer and by alluding to other interpretations of the material.

When used skillfully, lectures can be a useful part of your teaching repertoire. For example,lectures are most effective for conveying information that your students could not get any other way. In some fields scientific advances occur so rapidly that the only practical way to teach the subject is through lecturing. Lectures can also be used effectively to synthesize and interpret material for students, which is particularly useful in extremely complex subjects. Short lectures can provide an orientation to new material; prepare students for a film, an experiment, or a field trip; or summarize crucial points elicited from a class discussion. Beware, however, of allowing short orientation lectures to stretch into ever longer ones until you are back at the fifty-minute mark. If you are good at lecturing, you can communicate your excitement about the material and even inspire students to emulate your enthusiasm.

Interactive Lecturing

Many teachers have discovered that a highly interactive, question-and-answer technique overcomes the problems of the traditional lecture and makes it an effective learning experience. Instead of providing all the information yourself, you try to elicit much of it from your students through direct questions or unfinished statements. For example: "The two things the textbook listed as causes of this phenomenon were…?," and "John, how did the two authors you read for today interpret this issue differently?" Evaluative questions can elicit even more sophisticated information: "Linda, what do you think some of the limitations of this theoretical approach might be?" At the same time you can encourage students to ask questions about the material, thereby opening up two-way communication in the classroom. However, you should carefully prepare the questions you intend to ask so they will help build up the lecture and not lead down irrelevant pathways (you will find useful guidelines for constructing questions in the section on discussion-leading, below). Interactive lecturing overcomes many of the disadvantages of the traditional lecture, and provides incentive for students to keep up with their reading and other class preparations, since they know they will be asked to deliver opinions or answer questions in every class.

Introducing the Lecture

Preparing an effective lecture requires that you see it from the viewpoint of your intended audience. When you begin to speak, the first questions in students' minds are: "What is this lecture about?," "What will it cover?," and "Why is it important?" Beginning a lecture without surveying its scope and intent is equivalent to publishing a book without a table of contents. Ask yourself, "If I only had five minutes to talk about this subject, what would I say?" The answer to that question is the essence of your message, and should constitute part of your introduction. You should also make the structure of the lecture clear at the outset—the best teachers provide a blackboard outline of the major points they intend to cover and the order in which they will cover them. Relating the lecture topic to previous and subsequent course material places it in context for students and indicates its importance in the course as a whole.

By the time you finish the introduction, the students should know how the lecture will be organized, the major concepts it contains, and where it fits in the larger body of knowledge that they are studying. Ideally, the introduction should also include some attention-grabbing element to pique their interest and provide some intellectual excitement. For example, a lecturer on cell biology might begin by asking rhetorically "How is a giraffe like a potato?"—at the end of an effective lecture the teacher should be able to elicit the answer from the students. Consider this opening remark from a literature class: "Shortly before Hemingway killed himself, he made a statement that I think encapsulates all of twentieth-century literature"—the teacher did not reveal the statement until the end of the class. In math-related courses, it is a good idea to begin the lecture with a short review of important concepts from the previous class, and allow time for questions about that material—this technique helps lay a more solid foundation for the day's lecture.

Body of the Lecture

The body of your lecture will flow naturally from an effective introduction and must be carefully planned to allow for summaries, clear transitions, and logical sequences of development. In your lecture outline, note the points that you intend to elicit from students and write out the questions you intend to ask (make sure you ask for more than simple recall of material). Most good lecturers don't rely totally on the spoken word, but use diagrams, drawings, charts, and other graphic aids—imagine the difficulty of describing a double helix without a model, or at least a picture. You should include in your notes any drawings you intend to put on the blackboard and, if they are particularly complex, provide copies to your students. If you are teaching a subject that requires a great deal of writing on the blackboard, write clearly and large enough so that students at the back of the room can see and understand your points. Plan the way you will proceed (e.g., from top to bottom, left to right) so students will be able to follow the sequence of the material and so you won't need to erase anything before they have had a chance to write it down.

Use of Examples

As you prepare your notes, be sure to develop relevant examples of the ideas and concepts in the lecture. From research in cognitive psychology we know that many concrete examples are necessary for concept formation and that new information is learned better when it is related to concepts that we already possess. Draw attention frequently to the relationship between new and old material, and note especially any connections to the underlying themes of the course. If possible, draw parallels between course material and real-life experiences that students might share.

If you are teaching problem-solving, think carefully about all the steps in the solution and write them down so you will be sure to explain them in class. As laymen, students cannot be expected to make the leaps of logic which experts routinely make in problem-solving, so you should list the steps explicitly for students and invoke the steps as you work illustrative examples.

Concluding the Lecture

Every good lecture has a conclusion. Just as the introduction provides a launching pad for the lecture, the conclusion provides a landing field and provides a sense of accomplishment and closure. In the conclusion you answer questions posed at the outset, summarize main concepts, and show how lecture objectives have been accomplished. Consider eliciting this information

from your students rather than doing it yourself. If you did a good job in the presentation, they will be able to provide the conclusions.

Although you shouldn't teach any new material in the conclusion, you can use the opportunity to provide a bridge to the next lecture. Giving students a statement to ponder, a question to answer, or a problem to solve will help them prepare for the next class period.

Timing

Occasionally, your material may take only forty minutes of a fifty-minute period, but resist the temptation to start on the next lecture. Instead, use the time to review material, answer questions, or provide anecdotes about the day's topic. You should also avoid trying to cover so much that you run out of time and have to carry material over into the next class (although most teachers occasionally find themselves in this situation). If you discover that you have twenty minutes of additional material and only five minutes remaining in the period, summarize and reinforce the concepts you have already covered—don't lecture right up to the last minute or go over class time.

Timing problems are particularly troublesome when you have planned a course for 50-minute periods, meeting three times a week, and are assigned a 75-minute class that meets twice a week (or vice-versa). Well-designed lectures cannot be indiscriminately edited or spliced together; they stand on their own as complete units that accomplish a set of objectives. If you followed the course planning model in the previous section, you will have objectives for each class session and know which ones are the most important. To accommodate a longer class period, see if you can combine some of the more important objectives from adjacent lessons; for a shorter session, discard some of the less important objectives in your original plan. In some cases, you may need to consider an entirely different approach to the subject to achieve the objectives you have in mind. Don't be afraid to abandon a lecture that seems unworkable; there are usually other methods which will be just as effective (and perhaps more so).

Leading Discussions

When students are actively involved in manipulating ideas and information, they have a much greater chance of learning the material and using it. Indeed, it is doubtful that higher levels of knowledge and skills can be mastered without direct student involvement. A structured discussion, in which the teacher leads and facilitates the dialogue, affords excellent opportunities for this kind of active learning. Discussions of this type have been used effectively in classes of several hundred students, so class size is no barrier to the the method. Three conditions must be met for a successful discussion to take place:

1. Preparation. Discussions must be planned as carefully as lectures. First, you need to prepare sets of questions that will elicit information and provoke higher-level thinking on the part of the students. Second, you need to prime your students for the discussion by assigning thought questions on the topic ahead of time.

2. Motivation. Students must be convinced that they will derive some benefit from discussion. They have learned, over the years, that many class discussions devolve into pointless bull sessions. To change this expectation, you need to make your objectives perfectly clear at the outset, guide the discussion to insure that the objectives are achieved, and make sure that the students know the objectives were achieved. As students make important points, write them on the board and review them at the end of the discussion.

3. Absence of fear. Work to establish a spirit of open inquiry in the classroom. If students find that their comments are ignored, belittled, ridiculed, or treated as irrelevant, then, out of fear or frustration, they will not participate in discussions.

A good discussion is based on clearly formulated goals, and your preparation should start with an analysis of these goals. Ask yourself, "What should my students do, think, or feel at the end of the discussion that they couldn't before it began?" For example, you might expect students to demonstrate an ability to articulate their opinions about

a controversial issue and support arguments with evidence from the subject matter of the course. Another discussion objective might be for students to show they can interpret events or phenomena related to the course material. The objectives may address the development of thinking skills, specific questions related to the subject matter, or both, but in any case you need to have the outcome clearly in mind.

Preparing Questions for Discussion

The Socratic Method is based on the principle that, through a dialogue with the teacher, students can be led to discover solutions to problems on their own. In a structured discussion, questions posed by the teacher drive the dialogue in much the same way. But if you want to lead the students up a ladder of analysis, discussion questions must be organized in a logical hierarchy (see Figure 3). At the lowest level, "knowledge" questions requiring factual recall establish the general background and will help you determine the level of student preparation for the discussion. At the next level, "application" questions ask students to reach a conclusion based on evidence from the reading or other assignments. Because these questions require interpretation, inference, and reasoning from evidence, student answers will differ in style and substance, offering opportunities for disagreement and debate. In cases of interpretation there are usually no right or wrong answers, only stronger or weaker arguments for particular positions. At the highest level, "evaluation" questions demand judgments based on factual knowledge of the material, application of concepts, and evaluation of evidence. Notice that these three categories roughly parallel the levels of learning outlined in Figure 2.

Preparing the Students

Make sure the discussion topic is known to the students well before the class in which it will take place. Choose reading material that raises important and difficult issues. You can also use films, field trips, experiments, position papers, demonstrations, and other assignments as sources of discussion material, but always provide students with sets of questions to help them prepare for the discussion. Thought questions will enable them to read more effectively, to focus on the vital parts of the subject matter, and to concentrate on the important outcomes of an activity such as a field trip. Students will also be more at ease about participating in the discussion, since they know they will be prepared.

Some classroom layouts are more conducive to the discussion method than others. If your classroom has movable chairs, arranging them in a circle will facilitate face-to-face interchange and

Examples of Questions for a Class Discussion

Figure 3

Knowledge questions	Application questions	Evaluation questions
Did Descartes believe in God?	How do you know how many times to use l'Hôpital's rule in a given (differential calculus) problem?	What do you think might have been the result if the cotton gin had been invented 20 years earlier than it was?
What is the difference between a sodium atom and a sodium ion?	How would you explain the connection between confidence interval construction and hypothesis testing?	In this case study, what would you do about amortizing equipment costs if you were the chief accountant?
What three conditions must be met for something to qualify as a business asset?	How well do American secondary schools fit Weber's definition of bureaucracy?	A poet once wrote that "death is the brother of sleep." In light of the research articles you read, do you think the poet was close to the truth?

create a more egalitarian atmosphere. However, even if you teach in an amphitheater with desks bolted to the floor, you can still use the method successfully if you move out into the room to conduct the dialogue.

Conducting the Discussion

During the discussion, try to involve everyone in the class by directing questions to individual students (preferably by name). If you rely on volunteers, some students will monopolize the discussion and others will not speak up. Some teachers feel awkward about directing questions to particular students, but if you establish this practice from the first day of class and treat them with kindness and respect, they will accept the method without complaint.

Resist the temptation to answer your own question when a student doesn't answer immediately. Students need *at least* 20 to 30 seconds to think about a complex question. *Wait* for answers; for every few seconds of wait time, the response rate increases dramatically. Phrase your questions so they will be clear to the students; rephrase the question while waiting for a response. If a student cannot answer your question, direct it to another ; return to the first student later with a different question to give him or her a second chance.

There are many types of questions that you can use to facilitate the discussion. For example, to elicit more information, ask for clarification: "Could you please explain that further?" or "Could you restate what the author said in your own words?" Questions requiring substantiation of assertions force students to think in terms of support or evidence in the discussion: "What did the author say that supports your point of view?" or "Where did you find that in the reading?" To involve other students and to elaborate key concepts, ask for other students' reactions to a student's statement: "Bill, what do you think about Jim's response to that last question?" or "Mary, would you care to add anything to Bill's response?" As the discussion ranges over various viewpoints and interpretations, you may need to redirect attention to the material: "But how does your observation relate to the article we read for today's discussion?" or "We still haven't answered the basic question, which is …"

Provide encouragement and praise for correct answers, varying your responses so they don't sound mechanical. If you create a healthy atmosphere of debate and exchange, students will become the arbiters of correctness and will challenge students whose responses are not well thought out. Encourage students to question each other; if they are well-prepared, students will spontaneously raise issues central to the discussion. Don't ridicule wrong answers; try to extract a kernel of truth or an interesting point of contrast from poor responses. Instead of correcting students yourself, help them identify their own mistakes so they can improve their thinking skills.

An outgoing, friendly attitude will establish a relaxed atmosphere in class. You provide a powerful behavioral model for students; if you are defensive, they will imitate your behavior and the discussion will become a series of quarrels and recriminations. If you are willing to entertain alternative viewpoints and treat their ideas with respect, they will adopt the same standards and the discussion will be successful.

Sometimes students will raise questions the teacher cannot answer. Don't ever be afraid to say "I don't know." Offer to find out the answer and report it at the next class meeting. Students will respect your intellectual honesty and may begin to understand that no one knows all the answers.

At the end of class, spend a few minutes summarizing the main points of the discussion, or ask members of the class to summarize what they have learned. Summarization helps students focus on the important outcomes of the discussion and will also help them appreciate the fact that class discussions are important learning opportunities—just as important as lectures or other kinds of instruction.

Alternative Strategies and Active Learning

As you consider various modes of instruction, keep in mind that student learning depends primarily on what the *students* do, both in and out of class, rather than what the *teacher* does. Your task is to select activities through which students can master course objectives: lectures, discussions, written exercises, reading assignments, tests, group work, individualized instruction, field trips, observations, experiments, and many other kinds of experiences may be necessary for students to learn the things you want them to learn. The choice of strategies is affected by a number of considerations: the level of the objectives, the abilities of the students, your teaching skills and preferences, the size of the class, and many other factors. However, since college is supposed to help students sharpen their higher-order thinking skills, strategies that promote active involvement in learning should be the goal of every teacher.

Interactive lecturing and structured discussions are methods that promote a degree of student involvement, but in this section we will briefly describe some additional active learning strategies—there are many more in the literature on college teaching. We have provided a list of books at the end of this chapter for further reading, and the staff of the Center for Teaching and Learning will be happy to assist you in developing teaching strategies that promote active learning.

Peer Teaching

Research has shown that students who are required to teach something learn concepts better than if they are taught the material in conventional ways. In other words, teaching is a more effective learning strategy than being taught, and it makes sense to use this principle in the classroom to increase learning. Pairing students at learning tasks is more effective than having students work alone (a good reason for having lab partners in the natural sciences). Peer teaching can easily be incorporated in most classes. For example, you could make an assignment in which students must prepare their own questions on the main points of a reading selection; in class, have students work in pairs or small groups, alternately asking and answering questions they have prepared. During the session, you can move from group to group, giving feedback and asking and answering questions yourself. Students are more willing to share their views in small groups and often develop deeper insights about the material than they would working alone. In math-related courses, students could be required to make up original problems to solve (after completing a regular homework assignment). Instead of the dreary oral report so often used in social science classes, why not require students to prepare a lesson on the topic? Their grade could depend, in part, on how well the class answers test questions on that topic. Exercise caution in using this strategy, however, for undergraduates not only need instructions about how to teach a lesson, they should also know the criteria you will use for evaluating their performance.

Cooperative Learning Groups

Many teachers will occasionally break their classes into small groups for discussions, but only a few use the technique as a fundamental teaching tool. A class can be divided into learning teams that are periodically given instructional tasks to complete, either in or out of class. Research has shown that, with careful planning, this technique increases the efficiency and effectiveness of learning.

Groups of six or seven work best because this size is small enough for everyone to participate in problem-solving or debate, yet large enough for a spectrum of views to be represented. To work successfully, groups require a wide variety of viewpoints and intellectual skills, so it is important to make them as heterogeneous as possible. The individual data cards that you collect on the first day of class can yield important information about your students' backgrounds and preparation and make it easier to create heterogeneous groups. A professor of political science who uses long-term groups in his class tries to insure that each team has someone with a math background and at least one political science major. He creates groups with maximum diversity with respect to major, gender, race, and other characteristics.

The tasks that you assign for group work should challenge students to analyze phenomena, solve problems, apply theories, exercise judgment, or perform some combination of these activities.

Clearly-written instructions are vital to the success of this kind of exercise, which means that the teacher must analyze the task carefully and break it down into its component parts. During the exercise, the teacher moves from group to group, answering questions, clarifying instructions, giving advice, and observing the group process. Group exercises can be designed for 15 to 20-minute periods, and need not consume an entire period.

In a well-designed group activity, there should be little need for direct intervention by the teacher. It is true that many teachers are uncomfortable with the loss of direct control that accompanies small-group work, but remember that you still govern the process and outcome by the instructions you provide for the groups. Small groups can be used with a variety of other techniques, such as peer teaching, case studies, and simulations; imaginative teachers are discovering new ways to use the technique every day. At UNC, many English composition instructors have successfully structured their courses around cooperative learning groups, and teachers in some high schools are using the technique in math classes.

Case Studies

Case studies are appropriate for learning information analysis, decision-making, or problem-solving. The method, made famous by the Harvard business school, requires the development of a set of cases that reflect problems or issues in the course material. For example, in an Anthropology course, a case might describe the artifacts discovered in a real or hypothetical excavation. The students, as a group, would be expected to infer information about the life and culture of the people who lived at the site,based on knowledge and techniques they had learned in other parts of the course. Depending upon the nature of the material and the sophistication of the students, cases can be quite lengthy and complex. Classes can be divided into small groups to work on the case and the teacher can circulate among them to facilitate the process. Over the semester, cases can be made more complex and challenging as students become more knowledgeable.

The development of case studies for an entire course requires research into the method to master its subtleties. Cases must provide enough information to elicit analytical thought, but not so much that the solutions are obvious. This process can be very time-consuming, but once the cases are written, they may need only a few revisions to run successfully semester after semester. Remember that students need to master a common knowledge base before they will be ready to tackle a case study, and they need to understand clearly the steps in the analytical process they will use. Finally, managing the discussion of case studies requires techniques that differ from generalized discussion methods, and it would be helpful to observe a teacher experienced in the method before trying it yourself.

Simulations

Like case studies, simulations provide students with decision-making practice, but in a different, more engaging, format. Since simulations are based on real-life situations, they present students with choices and constraints that reflect real-world problems. For example, a class in political science might simulate a city council meeting to decide on the location of a halfway house for juvenile offenders. Students are given particular roles to play: members of the police department, representatives of neighborhood associations, social workers trying to reintegrate juvenile offenders into society, and others with conflicting concerns. The task facing the class is to come to agreement about the placement of the halfway house. The instructional objectives are threefold: to practice negotiation skills, problem-solving, and techniques for reaching compromise.

Simulations are more difficult and time-consuming to write than case studies, and they usually take more time in class, although the teacher's role is less directive than in the case study method. They also require more explanation before the exercise and, when completed, a careful exposition of what has been learned by relating students' experiences to the general principles involved. Nonetheless, simulations can be very effective in teaching problem-solving and in developing students' self-confidence.

Games

Games and simulations are closely related, and there are mixed varieties: simulation games, non-simulation games, and non-game simulations. For

our purposes, games will be defined as activities in which there are winners and losers, definite sets of rules for "moves," and which frequently require props or other paraphernalia. For example, in a game used in sociology classes, players are randomly assigned to several different groups and provided with colored markers which represent money. They are told to maximize their cash through negotiations and trade with other groups, but the rules for trading markers are actually stacked against certain groups—they literally cannot win. This game allows students to experience in a small way life in a rigid class society in which improvement of one's condition is made difficult or impossible by the society's economic rules. Although it is possible to devise games yourself, hundreds of instructional games and simulations have been published by organizations involved in education and training. The Center staff will help you research the literature for games that are appropriate for your objectives.

Written Assignments and Out-of-Class Exercises

Written assignments can be more original and exciting than the usual term papers, book reports, and homework assignments. Students are capable of producing fairly sophisticated work if the assignment is clearly explained and carefully structured. For example, you might require students to observe and report on a city council meeting, fundamentalist revival, ballet, construction site, archeological excavation, bus station, or protest march. Of course, you would need to teach them how to take observational notes and suggest an organizational framework for the final report.

Since many students have poor writing skills, you may find it desirable to assign shorter papers and provide for re-writes until their work is acceptable. In general, many short writing assignments are preferable to a single long paper, depending upon the goals of the course and the level of student skills. Regardless of the length of the assignment, clearly written instructions are indispensable (giving such assignments orally is usually not effective). The reference division of the Undergraduate Library provides a term-paper consultation service that assists students with writing assignments. Make sure your students know about this service and encourage them to use it.

In-Class Exercises

Class time can be used for focused activities in which students can practice essential skills. For example, in math-related subjects, after fifteen to twenty minutes of instruction on a particular kind of problem, you could require students to work examples alone for fifteen minutes. This technique forces them to try to apply the concepts that have just been taught, and usually produces questions that they did not think to ask during the lecture (and also provides a powerful antidote to boredom). Since students typically defer their homework problems until the night before the next class, they often lose the thread of the explanation by that time—immediate practice in class helps reinforce the explanation. Also in math-related courses, requiring students to work homework problems on the blackboard provides an opportunity to correct their errors and misconceptions and to ask questions about other homework problems while they are at the board.

In the social sciences and humanities, requiring short in-class writing exercises is analogous to working math problems in class. These exercises can take many different forms, for example: a paragraph defending or attacking a particular point of view, a one-page analysis of a reading assignment, or a short essay summarizing the student's impression of a class discussion. The variety of these short writing assigments is endless, and they need not take huge amounts of class time—many can be accomplished in ten minutes or less.

Media and Visual Materials

In higher education teachers often fail to exploit the instructional advantages of audiovisual materials. Teachers in some disciplines use media very heavily; others use none at all. We know that learning is enhanced by the use of visual aids because pictorial representations and symbols clarify verbal explanations and provide additional clues for memory. Effective teachers plan ways to engage the visual sense as an important part of the teaching process, regardless of what they teach.

Visual aids are most often used to illustrate or reinforce lecture material, but they can also be used to stimulate discussion and encourage student participation. For example, one award-winning teacher at UNC introduces statistical graphs by first asking students what they think a particular graph would look like, based on material they have already read or discussed. He then displays the graph and initiates a discussion about the accuracy or inaccuracy of student predictions about the material. Another master teacher uses short segments of videotaped interviews to stimulate discussion about counseling techniques. These "trigger tapes" often show ambiguous or even deliberately incorrect techniques, depending on the teacher's objective for the discussion.

Visuals can also be packaged in self-instructional units that students can use outside of class (e.g., workbooks, videotapes, and slide-tape programs), thereby saving class time for more important learning objectives. You can place audiovisual materials on reserve in the Undergraduate Library and students can use them in the Non-Print Materials section nearby.

Blackboards

Every classroom at UNC has a traditional chalkboard or the new white board that uses dry marking pens. Blackboards are such simple devices that teachers who have used them for years may never have considered some of the basic requirements for using them effectively.

The first requirement is that your writing should be large enough so students in the back of the room can read it; you may need to practice writing large and legibly. Some teachers with poor handwriting print on the board to insure legibility. The seating arrangements in some classrooms may keep students in the back from seeing anything written on the lower quarter of the board, so check with them to determine how much of the board they can see and don't write below that area. You may block their view when you are writing on the board, so stand out of the way after you have added something. "Talking to the board" is one of the most common teaching errors, so hold what you have to say until you have finished writing (unless you have a very strong voice).

Planning your use of the blackboard is very important. Review your class notes to determine the material you want to write or draw on the board, then decide the most logical way to proceed, planning your work so students will have ample time to record important material before it is erased. For example, one section of the board might be reserved for a topical outline or an important graph to which you refer throughout the class period. You could plan to fill other sections of the board from the top down with supporting information or drawings that follow a sequential pattern, then erase them as you need more space. Students will usually copy everything you write on the board, so you need to allow time for this, especially if you use pictures or diagrams that you alter as you go along. Instead of erasing and redrawing,use dotted lines or colored chalk to show changes so students will be able to follow your explanation better. The details in complex drawings are often illegible on a chalkboard, so it is better to use another medium, such as an overhead transparency, for a complex image.

Overhead Transparencies

Most people have little difficulty using overhead projectors because the technology is very simple. Some teachers use the projector as a surrogate for the blackboard, writing and drawing on clear acetate sheets with colored pens, but the medium has many advantages over the traditional blackboard. Transparencies can be prepared ahead of time to present more complex and polished images than are possible if drawn on the spot. Some teachers also duplicate the transparencies on handouts to insure that students get complete and accurate images. This step also insures that students don't have to divide their attention between

copying a diagram and listening to the teacher's explanation.

Transparencies can be drawn by hand with colored pens on clear acetate, but the common practice is to reproduce material on a copy machine that accepts acetate. The latter technique results in serviceable black-and-white transparencies. Some photocopying firms have color photocopy machines that produce full-color transparencies from colored originals, but the service tends to be expensive (about $4.00 per page). Many experienced teachers prefer to produce their transparencies on a thermal copy machine, since the image is darker and a selection of colored acetate is available. The Self-Service Lab at CTL has a thermal machine and a supply of acetate for use by faculty and teaching assistants—the service is free, but there are restrictions on the number of transparencies a teacher may make per semester. If you use computer graphics programs to produce visuals, the Center staff may be able to convert these files directly into transparencies on special printers, subject to hardware and software compatibility. Please call CTL for further information.

When using prepared transparencies, be sure that you give students sufficient time to analyze and copy the images in their notes (providing them with paper copies will speed up this process). Also, remember to turn off the projector when you have finished talking about the image on the screen, otherwise the image will provide a strong stimulus that can distract students' attention from the rest of your message. The on-off switch is an effective device for changing the focus of their attention from the screen to you and then back to the screen, as your narrative dictates. Mounting your transparencies in cardboard frames will make them easier to handle, and you can write your notes on the frames so your explanation will not be interrupted by having to refer to other notes.

Slides

Slides are as simple to make and almost as easy to use as overhead transparencies, but they do have some limitations in the classroom. Slides require a fairly dark room, and often this means that there is insufficient light for note-taking. Moreover, the distance between the projector and screen make it difficult for the teacher to control the projector and point out important elements on the screen (and long remote control cords have a tendency to malfunction). On the other hand, the projector is easily transportable, and slides are much easier to store than transparencies.

Many teachers make slides on research trips to illustrate phenomena or show locations that are otherwise inaccessible to students, and some departments have collections of slides that cover subject areas commonly taught in the curriculum. You can also make slides of pictures in books, magazines, or photo albums using the copystand in CTL's Self-Service Lab. If you wish, you can combine a set of slides with a taped narration to create a slide/tape program students can use in the same way they might view a videotape.

Random access to slides in a carousel tray is very difficult, and it is wise to plan the sequence of slides so you won't need to back up or use a slide out of order. If you need to refer to a slide more than once in a presentation, have duplicates made and insert them in the appropriate places. If you want to interrupt the slide sequence, insert a plastic slug or black slide at that point in the sequence (unless the projector you are using goes automatically to black when there is no slide in the slot). When the screen goes black, students will immediately shift their attention back to you.

Videotapes, Videodiscs, and Films

Videotapes are replacing films in the classroom because they are so much easier to use, and, with video beam projectors, the video image can be quite large. Although videodiscs have many advantages over videotape (such as instant random access to any part of the disc), they are not yet widely used in instruction because of their expense and lack of software.

The key to using film or video effectively is careful planning. Films or tapes should never be used as fillers for times when you plan to be out of town. Films should serve clearly-stated learning objectives and be carefully integrated into the rest of the course. Remember that you will be turning your class over to the medium for a significant length of time, so the film should provide something important to your students' understanding of the material. If only a portion of a film is relevant to

the course, just show that portion rather than waste time with the entire program. If a film is too long to fit into the class period, show part of it one day and part of it another day.

To insure that students derive maximum benefit from the film or video, it is a good idea to provide them with a short viewing guide that directs them to focus on particular aspects of the program and to answer questions about it. Viewing guides provide a basis for class discussions that relate the film to other course material and are also a convenient source of test questions (see example in Figure 4).

The Undergraduate Library's Non-Print Materials Collection and the Learning Resources Services in the Health Sciences Library have films and videos for instructional use. They can also help you locate films through film catalogues and computer data bases. In some cases they will handle rental arrangements, although rental fees and postage must usually be paid by the teacher.

Viewing Guide Figure 4

Film: "Killing Us Softly"
Soc 20: Social Problems

1. Ads are shown in this movie to be agents of socialization. In other words, we learn different values, attitudes, and behaviors from them. Be able to provide three examples of ads that socialize us in some way and be able to explain what we "learn" from these ads.
2. Does this movie deal more with advertising trends or simply with examples that highlight specific points? Provide support for your answer.
3. This film focuses on women—how are men portrayed in advertisements? How are other social groups portrayed?
4. Are there any changes in the presentation of men and women in ads lately that suggest a tendency away from the images shown in the movie?

Microcomputers

Microcomputers can enhance instruction in a variety of ways, and teachers are finding novel applications for the technology every day. As an alternative to classroom instruction, computers allow students to learn material on their own, at their own pace. They can provide learning experiences that simulate real-life problems, both in and out of class. Teachers can also use microcomputers as a presentation medium that goes beyond the traditional advantages of audiovisual aids.

Instructional software is now available for every subject area in higher education, providing individual drill and practice sessions, tutorials, or simulations that students can use on their own. In addition, teachers can assign projects that require the use of software for data processing or analysis. UNC's microcomputer labs are distributed across campus to provide access to computers for students who don't have their own machines, so an increasing number of teachers are making these kinds of assignments.

If you decide to assign microcomputer projects, first check with other members of your department to find out the kinds of projects they assign and the software they use. Although there are thousands of programs on the market, many of them are poorly designed or inappropriate for college-level work, so experienced teachers choose and test software carefully before using it in their courses. Once you have selected a piece of software, familiarize yourself with its features and apply it to the tasks you will assign to students. You will find that software descriptions and their actual performance can differ in important respects. Also check on the compatibility of the software with available computers and output devices in the labs. Finally, provide complete instructions for the assignment, just as you would for any other student project. Experienced teachers suggest that you demonstrate the software in class so students will know how the programs are supposed to work. It is also wise to ascertain how many of your students have used microcomputers before, and to what extent, because some of them may need remedial help before they can do the work. If project deadlines are tight, check to see if the microcomputer lab schedules provide sufficient opportunities for students to do the work.

Some classrooms have video beam projectors that can show microcomputer output, and an increasing number of teachers now use presentation software to illustrate their lectures in these classrooms. Presentation software can be programmed to show images in a straight sequence or in whatever order the teacher desires, and the graphics and color features of these programs make it easy to create a polished presentation. Some programs also enable you to show animated sequences. Remember, however, that students need time to take notes on the material you are showing, so reasonable pacing is very important.

Some teachers use classrooms with video projectors to run simulation software that was originally designed for individual use. The entire class participates in the simulation, making decisions at critical points, observing the results, and discussing the outcomes. In similar classrooms with mainframe connections, teachers often use the microcomputer as a terminal to illustrate mainframe applications in statistics and data processing. Currently (outside of the School of Journalism), there is only one classroom equipped with individual student work stations, so opportunities to use interactive computer strategies in the classroom are severely limited. For more information about voice, data, and video telecommunications technology on campus, contact the Office of Information Technology.

The CTL staff will help you if you are interested in exploring the use of microcomputers for instruction or need help locating appropriate software. Although a few departments will purchase software for instruction, the teacher or the students must usually pay for it.

The First Day of Class

Your first face-to-face contact with students is critical to the success of the rest of the course. Initial impressions can be changed only with difficulty, so you need to pay careful attention to your objectives for the first day of class. In general terms, you need to accomplish three objectives:

1. Introduce yourself to the students and the students to each other.
2. Answer students' questions and calm their anxieties about the course.
3. Provide a sample of the course content.

You will need the entire class period to accomplish these things, so don't dismiss class early—this is important work.

In a small class, you can set the tone for the entire course in the first class period by conducting a get-acquainted exercise before moving on to procedural matters. For example, after introducing yourself and providing some information about your background, scholarly interests, and teaching philosophy, reassure them that all their questions about the course will be answered before the end of the period. Then ask the students to learn the name, place of birth, and one interesting fact (e.g. heroes, favorite sports, favorite music, etc.) about the people sitting in the desks to their left and right. After five minutes, have the students introduce each other in sequence around the room. An exercise of this sort establishes a friendly atmosphere from the outset—it also sends them a message that you are interested in students as individuals. In large classes, you can allow time for students to learn something about their immediate neighbors, even if you must dispense with general introductions.

First Impressions

You want to appear well-organized, accessible to students, enthusiastic, helpful and fair—all of which are qualities students value highly in their teachers. If you have followed the guidelines in the previous sections of this handbook, you will have a well-designed syllabus as evidence of superior planning and organization. Spending a portion of the first class meeting discussing the layout of the course and the policies and procedures that govern it will underscore your interest in the course and the care with which you have planned it. If you review the syllabus one section at a time and show students how it can help them master the course material, they will be more likely to read it carefully and use it as a course guide. Your fairness and objectivity are indicated by a clear explanation of how course grades will be com-

puted. If you emphasize your willingness to meet with students outside of class (by appointment if they cannot make your office hours), you indicate your interest in their success and your desire to help them when they have difficulties.

Make sure you have copies of the textbook, lab manuals, and other materials to show on the first day. When they have had a chance to buy the books, require that they bring them all to class one day so that you can describe the kinds of information you expect them to get from their reading. For example, many textbooks have special features which students can use to guide their studies—special headings, "boxes" of information, boldface type, definitions, etc. You would be surprised how many students fail to recognize these features as important reading guides.

Part of the first class meeting should be spent getting acquainted. Sharing information about yourself, and if class size permits, getting students to share information about themselves, is an excellent ice-breaker which will also help you establish rapport with the class. Some students never learn the names of any of their classmates, which effectively means that they can't contact them for help or advice. (A student can sometimes explain a concept to another student better than the teacher can.) Some teachers distribute a class roster, with names and phone numbers, so students can call one another when they have problems.

It is also important that you learn your students' names so they will feel that you see them as individuals. There is some evidence that students are more motivated by teachers who learn their names. You can begin the learning process on the first day, even if you have a poor memory for names. Some teachers require students to bring in photos (with names clearly inscribed), while others use a polaroid camera to take snapshots on the first day. A few teachers videotape their students on the first day, having them file past the camera one at a time, giving their names and perhaps some background information. By watching the tape repeatedly, they quickly associate names and faces. You can also request that students choose a permanent seat so you can make a seating chart. If you explain that the seating chart is to help you learn their names, they will not object.

Motivation

The first day of class is an excellent time to address student motivation. Many instructors are concerned about motivating students who enroll primarily to fulfill a graduation requirement, but motivation is an issue in every class. If you want students to work to their full potential, you need to think of ways to enhance their motivation.

Motivation for learning depends on three interrelated factors:

1. Appreciating the value of the learning experience. ("What's in it for me?" or "When and where will I ever use this stuff?")
2. Having an expectation of success. ("Will I be able to learn the skills in this course?" or "Will I be able to make the grade I want in this course?")
3. Believing that performance is related to rewards. ("Will this course take more time than it is worth to me?" or "How much work will I have to do to get what I want from this course?")

If you spend time the first class meeting addressing these issues, both you and your students will benefit. For example, to show them the value of the learning experience you could discuss how the course material will be useful for different majors, how the concepts will enhance their general education, or how the learning will help them in their future careers—in short, illustrate the ways they will directly benefit from mastering the course material. With some clever questioning, you can probably elicit most of these points from the students themselves. By drawing attention to your reasonable criteria and fair procedures for earning course grades, you can show them that they can succeed, given a reasonable amount of work—that rewards will be meaningfully related to performance. You would be wise to return to these points several times during the semester so the ideas will be constantly reinforced.

Learning About Your Students

The more you learn about your students, the better you can teach them, and there are a variety of methods for gathering this kind of information. For example, you can distribute 3 x 5 cards on the

first day and ask them for some basic information: full name; first name or nickname they prefer to be called; campus address and phone; home address and phone; major or intended major; the name of their General College advisor; any special health conditions they think you should be aware of; why they are taking the course, and what they expect to get out of it. Depending on the nature of the course, you may want to ask additional questions, but the suggestions above are basic. If you ever need to get in touch with a particular student, you will have campus and home addresses on file (since students move frequently, the addresses given in the university directory are not always current). Also, knowing where the students come from will be useful when you are trying to develop relevant examples to illustrate course concepts (rural students may not understand examples taken from inner-city life and vice-versa). If a substantial number of students indicate that they are taking the course simply to fulfill a requirement, you may need to spend more time on motivation; if most indicate that they are in the course because they are strongly interested in the subject you might be able to take them much further than you originally planned.

In addition to 3 x 5 cards, you may wish to develop a student profile in a more informal way (if your class is small) by asking students to sign up for a time to meet with you during the first week of class. You can then interview them individually to elicit information about their skills, interests, and needs, and generally get to know them better.

Consider giving the class a non-graded "pretest" covering material you think they should already know and some material that you intend to cover in the course (this technique can be especially enlightening for teachers of courses with prerequisites.) Their performance will provide important information about how much remediation you will have to do, or how much of the course material they already know. You could ask them to write a non-graded essay on some aspect of the course that you assume they know something about. Their essays will provide a quick measure of their knowledge and their writing skills and may afford insights about their preconceptions or misconceptions about the course material. For example, in a course that focuses on a foreign country or region, you could ask them to write what they know about life in that country; in a course in music appreciation, they could write about their favorite composers.

As you plan activities that will satisfy the two "get acquainted" objectives, leave sufficient time for a third objective: providing a sample of course content and your teaching style. For example, you could plan for a mini-lecture or discussion on a course topic they already know something about, show a short film related to course content and have a discussion, or devise an activity through which they learn about the nature and scope of questions the course is intended to answer.

You may discover that you can combine several of these activities—there are no hard-and-fast rules as long as you achieve the objectives. However, by the end of the first meeting your students should have a clear idea of your expectations for their performance, know what to expect in every stage of the course, and be convinced that they made a good choice in selecting your course.

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Evaluation Issues

Testing and Other Forms of Student Evaluation

As the title of this section implies, testing is only part of the evaluation of learning. Every time you ask a question in class, monitor a student discussion, or read a term paper, you are evaluating learning. Moreover, the evaluation process (whether it involves examinations or not) is a valuable part of the teaching process. The primary purpose of evaluation is to provide corrective feedback to the student, the secondary purpose is to satisfy the administrative requirement of ranking students on a grading scale. Paper and pencil tests are simply a convenient method to fulfill both functions.

Types of Tests

From the standpoint of measurement, tests fall into two general categories: those in which students *select* the correct response from information provided on the test and those in which students must *supply* the answers themselves. True-false, multiple-choice, and matching tests are in the

former category; short-answer and essay tests are in the latter. The cognitive capabilities required to answer supply items are different from those required by select items, irrespective of content. Owing to limitations of space, we cannot provide an exhaustive explanation of the types of tests and rules for writing them, but we will offer a few guidelines for each type and focus primarily on the two most widely used types of exams: multiple-choice and essay.

Selection of Test Material

The selection of material to be tested should be based on learning objectives for the course, but the complexity of the course material associated with those objectives (and the limited time for taking exams) means that you can only *sample* the material in any given unit or course. The chart in Figure 5 is a table of specifications or blueprint for a test. The important concepts in the unit to be tested are listed down the left side of the page. The vertical columns represent three levels of learning: "knowledge," "application," and "evaluation." These categories parallel the cognitive levels in the taxonomy provided in Figure 2 (in the section on course design) and the three levels of questions illustrated in Figure 3 (in the section on discussion-leading). Other categories may be used, but you should have a clear idea of the level of learning each one represents. As you write test questions, decide which level they fit and enter their numbers in the appropriate cells in the matrix. This simple method allows you to check if you are testing the levels of learning you want to test. For example, if you find large numbers of questions falling into the knowledge column, it will be instantly apparent. Note that some of the cells in the matrix may be blank and some will contain larger numbers of questions than others. These frequencies should reflect the emphasis placed on these concepts when they were taught.

General Techniques

All tests should have complete, clearly-written instructions, time limits for each section, and point values assigned to different questions or groups of questions. The question sheets should be clearly typed and duplicated so that students

Table of Specifications for a Test in Psychology — Figure 5

Content Categories	Objectives		
	Knowledge	Application	Evaluation
A. Identify crisis vs. role confusion; achievement motivation.	2, 9	4, 21, 33	16
B. Adolescent sexual behavior; transition of puberty.	5, 8	1,13, 26	11
C. Social isolation and self esteem; person perception.	14, 6	3, 20	25
D. Egocentrism; adolescent idealism.	7, 29	12, 31	10, 15, 27
E. Law and maintenance of the social order.	17	22	18
F. Authoritarian bias; moral development.	19	30	24
G. Universal ethical principle orientation.	28	23	32

have no difficulty reading them. If your tests require optical scanning sheets, make sure students know where to buy them and how to use them (#2 pencils, complete erasures, avoid folding or crumpling).

When grading exams, strive for fairness and impartiality by keeping the identity of each student secret from yourself until you have finished the entire set of tests. Some teachers ask students to use their social security numbers (or some other code) instead of their names on exams to insure anonymity.

Some additional issues arise in testing in math and the natural sciences, since students are required to work problems on their exams. Answers may be right or correct but differ in accuracy and completeness, so the type of answer and the degree of precision you expect must be clearly specified. You must also decide how much work the student will be required to show and how partial credit will be allocated for incomplete answers.

Keep in mind that the basic purpose of a test is to measure student performance, and the best teachers constantly work to refine their testing techniques and procedures. Poor techniques may result in tests that only measure the ability to take a test—test-wise students will perform well whether or not they know the material.

Validity and Reliability

The two most important characteristics of a test are its content validity and reliability. A test's validity is determined by how well it samples the range of knowledge, skills and abilities that students were supposed to acquire in the period covered by the exam. Reliability is determined by how consistently the test can be graded and how well the test discriminates between students of differing performance levels. Well-designed multiple-choice tests are generally more valid and reliable than essay tests because (a) they sample material more broadly (since you can ask so many more questions); (b) discrimination between performance levels is easier to determine; and (c) scoring consistency is virtually guaranteed. On the other hand, essay questions can test the upper levels of cognition (analysis, synthesis, evaluation) more easily than multiple-choice questions.

Guidelines for Writing Questions

Writing good exam questions requires plenty of time for composition, review, and revision. If you jot down a few questions after class each day when the material is fresh in your mind, the exam is more likely to reflect your teaching emphases than if you wait to write them all later. Also, it is beneficial to ask a colleague to review the questions before you give the exam—another teacher might identify potential problems of interpretation or spot confusing language. The process of test development does not end when the students take the exam; careful analysis of the results will help refine your questions and sharpen your testing technique.

Multiple-Choice Questions

The major weakness of multiple choice tests is that teachers may develop questions that require only recognition or recall of information. Multiple-choice questions in teachers' manuals that accompany textbooks often test only recognition and recall. Strive for questions that require application of knowledge rather than recall. For example, interpretation of data presented in charts, graphs, maps, or other formats can form the basis for higher-level multiple-choice questions.

Writing the Stem

The "stem" of the item, which poses a problem or states a question, should be written first. The basic rule for stem-writing is that students should be able to understand the question without reading it several times or having to read all the options.

1. Write the stem as a single, clearly-stated problem. Direct questions are best, but completion statements are often necessary to avoid awkward phrasing or convoluted language.

2. State the question as briefly as possible, avoiding wordiness and undue complexity. In higher-level questions the stem will normally be longer than in lower-level questions, but you should still strive for brevity.

3. State the question in *positive* form, if possible, because students often misread negatively-phrased questions. If you must write a negative stem, emphasize the negative words with

underlining or all capital letters. Beware of using double negatives—e.g. "Which of these is not the least important characteristic of the Soviet economy?"

Writing Response Options

Multiple-choice questions normally have four or five options, to make it difficult for students to guess the correct anwer. Only one option should be unequivocally correct; "distractors" should be unequivocally wrong. If you write items in which more than one answer is correct and the student must pick out all the correct responses, each item is essentially a set of true-false questions, with their attendant problems. The basic rules for writing responses are: (a) students should be able to select the right response without having to sort out complexities that have nothing to do with knowing the correct answer, and (b) students should not be able to guess the correct answer from the way the responses are written.

1. Write the correct answer immediately after writing the stem and make sure it is unquestionably correct. In the case of "best answer" responses, it should be the answer that authorities would agree is the best.

2. Write the incorrect options to match the correct response in length, complexity, phrasing, and style. You can increase the believability of the distractors by including extraneous information and by basing them on logical fallacies or common errors. It is not fair to make the incorrect options attractive by using terminology that is completely unfamiliar to the students.

3. Avoid composing alternatives in which there are only microscopically fine distinctions between the answers, unless the ability to make these distinctions is a significant objective in the course.

4. Avoid using "all of the above" or "both A and B" as responses, since these options make it possible for students to guess the correct answer with only partial knowledge.

5. Use the option "none of the above" with extreme caution. It is only appropriate for exams in which there are absolutely correct answers, like math tests, and it should be the correct response about 25% of the time in four-option tests. ("None of the above" is often used in questions requiring mathematical computations to prevent students from working backwards from the options to determine the correct answer.)

6. Avoid verbal clues that give away the correct answer. These include: grammatical or syntactical mismatches between the stem and options; key words that appear only in the stem and correct response; stating correct options in textbook language and distractors in everyday language; using absolute terms (always, never, all) in distractors; and using two distractors that have the same meaning.

7. All of the options must be plausible; humorous throw away options defeat the purpose of having multiple options, which is to reduce the possibility of getting the correct answer by chance.

All questions in a multiple-choice test should stand on their own, so avoid using questions that depend on knowing the answers to other questions on the test. Also, check to see if information given in some items provides clues to the answers of others. Randomly assign the position of the correct response—some teachers use "c" as the correct option 80% of the time, and students quickly recognize the pattern. Finally, never use trick questions—they have no legitimate testing function.

Item Analysis

After a test has been given, it is important to perform a test-item analysis to improve its validity and reliability. Most machine-scored test printouts, including those at UNC, include statistics for item difficulty, item discrimination, and frequency of response. Figure 6, based on a printout for a test in Business Law, illustrates the way test statistics are usually presented. (For information about the test scoring and analysis service in Academic Affairs, contact User Services, Office of Information Technology.)

The difficulty index is simply the percentage of students who answered the question correctly. In

a four-option question, the chance of guessing correctly is 25%, so it is wise to re-write any item that falls below 30%. Testing authorities suggest that you strive for items that yield a wide range of difficulty levels. In Figure 6, the difficulty index ranges from .3353 (33.53%) to .9281 (92.81%). The difficulty index is handy for checking items that you expect to be particularly difficult or easy. Results that vary widely from your expectations may require rewriting the questions or changing the way you teach the material.

Item discrimination on the UNC printout is found under "point biserial" and "upper-lower disc. index." Both calculations are based on procedures that divide class scores into upper and lower portions and compare their performance on each question. For an item to discriminate well, most of the upper group should get it right and most of the lower group should miss it. The point biserial statistic is the correlation between the total correct score on the item and the total correct by the *upper* portion of the class, so the higher the number, the better the discrimination. In Figure 6, items 6, 9, and 23 have much lower correlations than the rest and should be examined for evidence of poor construction.

The upper-lower discrimination index is calculated by subtracting the proportion of students below the 27th percentile who answered the item correctly, from the proportion above the 73rd percentile who got it right. If all in the upper group are correct and all in the lower group are incorrect, the index would be +1.0000. In Figure 6, items 6, 9, 10, 15, 19, and 23 fall below .2000 and are therefore suspect.

Another page of the printout (not shown in Figure 6) will contain frequency of responses and pro-

Item Analysis Printout — Figure 6

Item	Weight	Difficulty Index	Point Biserial	Upper-Lower Disc. Index
1	1	0.6407	0.4078	0.5031
2	1	0.8263	0.4074	0.3725
3	1	0.3353	0.2988	0.3784
4	1	0.5030	0.3146	0.4097
5	1	0.8563	0.2982	0.2303
6	1	0.6627	0.1809	0.1794
7	1	0.8982	0.4243	0.2549
8	1	0.8253	0.3813	0.3709
9	1	0.6325	0.0561	0.0338
10	1	0.7904	0.2449	0.1648
11	1	0.8563	0.4997	0.4118
12	1	0.8383	0.3329	0.2286
13	1	0.8434	0.4213	0.3333
14	1	0.7485	0.4831	0.4460
15	1	0.9281	0.3010	0.1552
16	1	0.7485	0.2785	0.2612
17	1	0.6325	0.4413	0.5440
18	1	0.5663	0.3885	0.5357
19	1	0.8675	0.2695	0.1944
20	1	0.7831	0.4561	0.4493
21	1	0.6766	0.5350	0.5816
22	1	0.7485	0.2884	0.3872
23	1	0.5090	0.1200	0.1285
24	1	0.7425	0.5107	0.5670
25	1	0.7186	0.3505	0.3642

portion of responses for each alternative on each question. By examining the response figures for incorrect alternatives, you can determine if these choices were equally attractive to students who got the item wrong. Ideally, each incorrect option should be chosen by an equal number of students, and if no one chooses a particular distractor, rewrite it before using the question again. If many students chose an incorrect option, it would be wise to find out the reason.

Matching Questions

Matching questions are a type of multiple-choice question, and the same principles apply to writing them. It is extremely difficult to write matching items that test higher-order learning. The connections that students make between two concepts may reflect only a barely understood association rather than a full appreciation of the relationship.

In matching items, the student is presented with two related lists of words or phrases and must match those in one column with those in a longer column of alternative responses. Obviously, one should use only homogeneous words and phrases in a given set of items to reduce the possibility of guessing the correct answers through elimination. For example, a list which includes names, dates, and terms is obviously easier to match than one containing only names. Arrange the lists in alphabetical, chronological, or some other order. Keep the lists short (ten to twelve items) and type them on the same page of the exam.

Completion Questions

Completion questions, short-answer questions, and essays form a continuum of questions that require students to supply the correct answers. Completion questions are an alternative to selection items for testing recall, but they cannot test higher-order learning. In writing completion items, give the student sufficient information to answer the question but not enough to give the answer away. For example, articles (a, an, the) and specific antecedents often provide clues. Blanks should occur at the end of the statement, and required responses should be short. Sometimes multiple-choice questions can be converted to completion items, a feature that can be useful in creating subsequent tests on the same material.

Short-Answer Questions

Short-answer items can take a variety of forms: definitions, descriptions, short essays, or mixtures of the three. Because of this flexibility, they can measure some elements of higher-order learning. Specific instructions are the key to successful short-answer questions. Questions that require students to generate their own response need clear, unambiguous directions for the expected answer. For example, if you ask for a definition, outline the expected length of the response and the specific elements you require in a complete definition. In this case, you might limit the response to "two sentences which contain a description of the term's literal meaning and its application to the course." On a typed exam, leaving only enough space for the desired length of response may help, but unless the instructions are specific, students may cram whole paragraphs of tiny writing into the space. Short essays can require students to apply their knowledge to a specific situation carefully delimited by instructions. This type of question is the equivalent of a math or physics problem.

The requirement of specificity is not only for the students' benefit in answering the questions, but also to make the answers easier to grade. With the directions, list the number of points each question is worth; for longer questions with higher scores the worth of each section should be clear.

Essay Questions

Many teachers consider essay questions the ideal form of testing, since essays seem to require more effort from the student than other types of questions. Students cannot answer an essay question by simply recognizing the correct answer, nor can they study for an essay exam by memorizing factual material. Essay questions can test complex thought processes, critical thinking, and problem-solving skills, and essays require students to use the English language to communicate in sentences and paragraphs—a skill that undergraduates need to exercise more frequently. But essay questions which require no more than a regurgitation of facts do not measure higher-order learning. Essay exams also place limitations on the amount of material that can be sampled in the test, a fact that may cause a student to complain (some-

times legitimately) that "I knew a lot more about the subject than the test showed," or "Your test didn't reflect the material we covered." For better sampling of the material, it is preferable to design tests that include several different kinds of questions: multiple-choice, short-answer, and essays of varying lengths. The following guidelines will help you avoid many of the drawbacks of essay questions. Although these guidelines are written from the perspective of the social sciences and humanities, most of these rules also apply to devising long problems in science courses.

Since one of the advantages of essay questions is their ability to test elements of higher-order learning, your first task is to define the type of learning you expect to measure. For example, do you expect students to be able to construct a reasoned argument from evidence, to analyze weaknesses in competing arguments, to select the best course of action in a new situation, or some combination of all these things? The best essay questions are based on the cognitive skills underlying the content rather than on the content alone.

If you wish to test problem-solving skills, the format and method for solving the problems must be clearly communicated to students. Presenting problems with no clues about how to proceed may cause students to adopt a plausible but incorrect approach, even if they knew how to solve the problem in the correct way. If you are interested in testing students' writing skills, you need to stipulate the kinds of skills that they must demonstrate and provide some test time for thinking and composing a well-crafted answer (otherwise, the effects of time pressure and test anxiety will usually result in poor writing).

Validity and Reliability of Essay Tests

It is helpful to distinguish between essay questions that require objectively verifiable answers and those that ask students to express their opinions, attitudes, or creativity. The latter are more difficult to construct and evaluate because it is more difficult to specify grading criteria (they therefore tend to be less valid measures of performance). Take-home tests and other out-of-class writing assignments may be more appropriate for demonstrating these kinds of skills.

Allowing students to select which essay questions to answer (e.g. "choose two out of five") is not a good practice. It is virtually impossible to compose five equivalent essay questions, and students will usually choose weaker questions and thereby reduce the validity of the exam. Some teachers follow this practice because students complain that their exams are too difficult. If their complaints are well-founded, the teacher would be wise to seek help in composing better questions rather than risk creating invalid exams.

The reliability of essay questions can be increased by paying close attention to the criteria for answers. Many teachers don't realize that it is not only necessary to compose a model answer, but to provide students with instructions that will elicit the desired answer. First, write an outline of your best approximation of the correct answer, with all of its sections in place. Decide on the total number of points the essay will be worth and assign points to each section. When you have read over your answer several times and are satisfied that it will measure the appropriate course objective, write the instructions students will need to answer the question with the scope and direction you intend. Describe the expected length of the answer, its form and structure, and any special elements that should be present. Figure 7 is an example of an essay question from a mid-term test in Anthropology. This question exemplifies the guidelines for increasing the reliability of essay questions, and illustrates three levels of cognitive complexity: Part 1 is primarily recall of knowledge, Part 2 is application, and Part 3 is evaluation.

Grading Essay Tests

Good grading practices also increase the reliability of essay tests. Research has shown that the scoring of essays is usually unreliable; scores not only vary across different graders, they vary with the individual grader at different times. Graders can be influenced by extraneous factors such as handwriting, color of ink, and word spacing. If the grader knows the identity of the student, his/her overall impressions of that student's work will inevitably influence the scoring of the test.

Grading should be done anonymously. When grading essay questions, fold the blue books over so that the names are not visible (even better, ask

students to use their social security numbers rather than their names). If there is more than one essay question on the test, grade each essay separately rather than grading a student's entire test at once. Otherwise, a brilliant performance on the first question may overshadow weaker answers in other questions (or vice-versa). It is also easier for the grader to keep in mind one answer key at a time. Shuffling the papers after grading each question will help compensate for the tendency to give later papers lower scores as you grow tired.

Before starting to grade a batch of tests, skim over several essays to determine if the model answer needs to be modified. If, through some quirk in wording, students misinterpret your intent, or if your standards are unrealistically high or low, you can alter the key in light of this information. The effects of an ambiguous lecture or other anomaly in teaching the material can also be a legitimate reason for altering the answer key. If these problems are not in evidence, and you have carefully constructed the model answer, students should not be able to surprise you with better answers than yours. However, you should be open to legitimate interpretations of the questions different from your own. Finally, unless you intend to grade grammar, syntax, spelling, and punctuation as part of the examination, try to overlook flaws in composition and focus instead on the accuracy and completeness of the answers.

Essay Question Example Figure 7

Lectures covering *Piltdown Man*, *Gradualism*, *Punctuated Equilibrium*, and *Catastrophism* were given sequentially to illustrate the interplay of theory and fact in the formulation of an anthropological account of the evolution of Humankind. Write a three-part essay addressing the following questions:

1. Name the major proponents of the underlined concepts above and briefly describe the significance of these people for the history of a science of evolution. (10 minutes, 10 points)

2. Select any two of the four concepts above and explain how they illustrate the relationship between fact and theory. (10 minutes, 10 points)

3. In your opinion, are new discoveries or theories of evolution really new or are they just repetitions of past ideas that have fallen out of favor? Your answer to part 3 must draw upon the four concepts underlined above and be consistent with what your have already written in parts 1 and 2. (20 minutes, 20 points)

It is important to write comments on test papers as you grade them, but comments do not have to be extensive to be effective. Point out specific elements of the answer that were omitted or incorrect and the number of points lost as a result. For example, you might assess penalties for incorrect statements, omission of relevant material, inclusion of irrelevant material, and errors in logic that lead to unsound conclusions. Students have a right to know the reasons for the grades they receive, and need specific guidance to improve their performance. Strive for a few analytical comments on the good and bad aspects of the essay rather than a detailed critique—writing too many comments tends to overwhelm students, and they may miss the main points of your critique.

Distributing your model answers with the corrected essays can alleviate some of the burden of writing comments on exams; this practice has several other benefits as well. Students tend to learn a little more when they compare their answers with the model, and they develop a clearer picture of why they received the grade they did, thereby reducing the number of requests that you re-grade their papers.

Grading

Assigning grades is one of the most difficult tasks you will face in teaching. Teachers must combine a variety of disparate elements of student performance into a single course grade: verbal skills, ability to memorize, retention of factual information, ability to synthesize material, ability to make reasoned judgments about the material, etc. It is difficult to devise a grading method in which the final grade fairly reflects all aspects of a student's performance. Within certain limits, every teacher is allowed to develop his or her own grading system, and because standards are very personal

and idiosyncratic, grades are not a currency that has a uniform value—an "A" from one teacher may be the equivalent of a "C" from another. Part of the problem with grading arises from the fallibility of the tests we use to measure student performance. Few teachers are confident that they can assess student achievement accurately and consistently, and the effectiveness of any grading system is highly dependent upon the accuracy of the tests on which it is based. Nonetheless, there are some guidelines that will help you devise a fair and reasonably accurate system of grading.

You should first investigate your department's policies on grading practices. Even if there is no written policy, there may be traditions and unwritten rules regarding grading, and your grading system will need to conform to these rules. If you are a TA grading for a professor, he or she should explain the policies and procedures to you in complete detail, and if any problems develop in the system you should let the professor know immediately (especially if students express confusion or dissatisfaction with the grading scheme).

Grading and Feedback

It helps to make a distinction between grading and other forms of feedback. A grade is a certification of competence that should reflect, as accurately as possible, a student's performance in a course. If this goal is achieved, grades will have the same value from semester to semester and from year to year. When we include grading elements that are difficult to measure accurately (such as effort or participation) we reduce the strength of the relationship between grades and academic achievement. Furthermore, when we use grades for reward or punishment, give extra credit for additional work, or grade on attendance, we contaminate the meaning of grades and reinforce the students' belief that a course grade has less to do with academic performance than with fulfillment of arbitrary requirements.

We must give students feedback in many of these areas of behavior, but using the grading system for this assessment is inappropriate. Moreover, we often complain that students are excessively grade-oriented, but attaching a grade value to every aspect of student performance reinforces our students' preoccupation with grades. Avoid using grades as incentives for performance and seek out non-graded methods for motivating students. For example, verbal rewards in class, individual conferences, and written critiques can provide feedback without contaminating the grading system.

Elements of a Grading System

A good grading system must meet three criteria: (1) it should accurately reflect differences in student performance, (2) it should be clear to students so they can chart their own progress, and (3) it should be fair. Performance can be defined either in relative or absolute terms (comparing students with each other or measuring their achievement against a set scale), and each system has its defenders. Whichever grading scheme you use, students should be able to calculate (at least roughly) how they are doing in the course at any point in the semester. Some relative grading schemes make it impossible for students to estimate their final grades because the cutoff points in the final distribution are not determined until the end of the course. A complete description of the grading system should appear in the course syllabus, including the amount of credit for each assignment, how the final grades will be calculated, and the grade equivalents for the final scores. Also, students should perceive the grading system as fair and equitable, rewarding them proportionately for their achievements. From the standpoint of measurement, many different kinds of assignments, spread over the entire semester provide a fairer estimate of student learning than one or two large tests or papers.

Relative (norm-referenced) grading systems are probably the most widespread in higher education. In relative grading, students are in competition with one another for a limited number of grades in each category, and a student's grade is based on his or her relative position in the class. By contrast, absolute (criterion-referenced) systems use an unchanging standard of performance against which student performance is measured, so a student's grade is related to his or her achievement of particular levels of knowledge, skills, and understanding. No grading system is foolproof, for the integrity of any system depends on the teacher's ability to devise valid and reliable measurements of student performance. Measurement error is the greatest hindrance to effective grading.

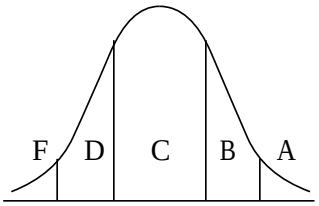
Relative Grading Systems

Relative grading is based on two assumptions: (1) one of the purposes of grading is to identify students who perform best against their peers and to weed out the unworthy, and (2) student performance more or less follows a normal distribution—the famous bell-shaped curve. Teachers who use relative grading point out that these systems correct for unanticipated problems (e.g. widespread absences due to a flu epidemic, tests that are too hard or too easy, or poor teaching) because the scale automatically moves up or down. Students like relative grading for the same reason.

The Curve

One of the most common relative grading systems is "grading on the curve." Use of the curve as a grading model is based on the discovery, earlier in this century, that IQ test scores over large populations approximate a normal distribution (Figure 8). Although it is true that the larger the class, the more likely that student performance will begin to look something like a normal curve, the assumption that performance is normally distributed is usually unjustified, even in large sections. In the first place, college students are a highly selected group, not representative of the general population with respect to background or intelligence. Second, we cannot be sure that our tests accurately measure student achievement—even standardized exams are suspect in this regard.

The Normal Curve Figure 8



Fortunately, few teachers adhere to a strict normal distribution, since it will fail a fixed percentage of the class and award "A's" to a fixed percentage, without reference to the overall level of performance. Forcing students into this scale tends to wreak havoc with their motivation. Consequently, many people use a "skewed curve" in which the distribution is shifted upward slightly, resulting in fewer grades below "C" and more in the "B" category. However, few teachers base their modified curves on statistical principles or cumulative performance data; they simply select a distribution that "looks right." Typically, the rationale for grade cutoff points is based on tradition rather than on analysis of student performance over time. The major problem with any curve is that one cannot be sure that differences in performance are real or simply artifacts of the distribution—was the performance of the top 5 students who got "A's" substantially different from that of the 15 who received "B's?"

The Standard Deviation Method

Statistically speaking, the soundest relative grading system is the standard deviation method. In this system student grades are based on their distance from the mean score for the class rather than on an arbitrary scale. To calculate the standard deviation, the teacher creates a frequency distribution of the final scores and identifies the mean (average) score. Using the formula in Figure 9, the standard deviation is computed so that cutoff points for each grade level can be determined. Spreadsheets can be programmed to perform the math automatically.

Standard Deviation Formula Figure 9

$$S.D. = \sqrt{\frac{N\Sigma X^2 - (\Sigma X)^2}{N(N-1)}}$$

Where X = mean of final scores
ΣX^2 = sum of all squared final scores
$(\Sigma X)^2$ = squared sum of all final scores
N = number of final scores

Cutoff points for "C" grades range from one-half the standard deviation below the mean to one-half above. Adding one standard deviation to the upper "C" cutoff will yield the "A-B" cutoff point, and subtracting one standard deviation from the lower "C" cutoff will provide the "D-F" cutoff point (see examples in Figure 10).

Although the standard-score method of computing grades is statistically superior to other relative grading methods, there are several cautions to

keep in mind. As with other relative grading schemes, capable students in "high achievement" classes may be unfairly penalized and poor students in "low achievement" classes may unfairly benefit. The method requires some knowledge of statistics and the mathematical tranformations involved so you are not working blind.

Standard Deviation — Figure 10

	Class I	Class II
Mean of final scores	= 79.2	60.76
Standard deviation	= 12.79	9.85
Upper "C" cutoff	= 85.6	65.69
Lower "C" cutoff	= 72.8	55.83
"A/B" cutoff	= 98.4	75.54
"D/F" cutoff	= 60.0	45.98

T Scores

Some teachers use a related method to transform raw test scores to standardized scores before averaging, but prefer to use another method for determining final grades. Averaging tests with different means and standard deviations is akin to adding apples and oranges, and raw scores cannot be weighted or averaged without introducing a bias. Transformation to standard scores adjusts for differences in means and standard deviations and thereby preserves the mathematical integrity of each score. "T scores," which have a mean of 50 and a standard deviation of 10, are often used for this purpose, and spreadsheets can be programmed to make the transformations automatically. Of course, you must explain to students how their scores are being transformed so they won't be confused about their averages.

The Gap Method

Another relative grading scheme is the "gap method," but it is difficult to defend on the basis of statistics or measurement theory. In this system, students' total course scores are arranged in ascending order and the teacher looks for naturally-occurring gaps in the distribution of the scores. Unfortunately, the gaps may not reflect real achievement differences but simply chance occurrence, and they may not appear at reasonable points in the distribution. The primary advantage of the gap system is that there are fewer complaints about borderline grades, since students are unsophisticated about grading systems and will likely accept the gaps as proof of significant differences in performance.

Absolute Grading Systems

Absolute grading is based on the idea that grades should reflect mastery of specific knowledge and skills. The teacher sets the criteria for each grade, and all students who perform at a given level receive the same grade.

Percent of Total Points

The simplest absolute grading scheme is "percent of total points possible." The teacher decides on the total number of points that a student could earn in the course and sets arbitrary achievement levels based on the total. The cutoff for "A" grades might be 90%, for "B's," 80%, and so forth, and it is assumed that a student who makes 83% knows 83% of the material. If every student scores above 90%, they will all receive "A's." Although this method does provide clear performance targets for students, there are several problems associated with it. First, the rationale for the cutoff scores is usually murky and is often based on intuition rather than analysis. Second, the system is based on the assumption that the teacher can construct valid, reliable exams and assignments at consistent levels of difficulty. Third, some teachers apply the same performance scale to every evaluation component, a practice which does not take into account the variability of assignments or adjust for particularly difficult or easy assignments. Finally, some students may achieve a high number of points simply by doing well on many small, less important assignments.

Objective-Based Grading

Objective-based grading is perhaps the most sophisticated kind of absolute grading because the method attempts to equate grades with different kinds of performance. In all the grading systems reviewed above, the teacher assumes that students who receive good final grades have learned the more important material and mastered more complex levels of thinking, but this assumption may not be valid. For example, students who do very well on objective exams and poorly on written

assignments may earn a respectable final grade, but may not have mastered important intellectual skills that the teacher had in mind. The objective-based grading method takes into account both the amount of material students learn and the level of cognitive complexity they achieve.

To use objective-based grading, the teacher must first review the kinds of knowledge and skills that are *implicit* in the course and make them *explicit* as course objectives. (Refer to the section on course design for a more detailed treatment of course objectives.) You must identify two kinds of outcomes: minimal and developmental objectives. Minimal objectives are statements of essential course outcomes and basic skills; developmental objectives reflect higher-order cognitive processes such as critical thinking, decision-making, and complex problem solving. For example:

Minimum Essential Objectives
The student will be able to:
- describe different kinds of plasmids
- describe transposons
- explain how transposon mutagenesis works

Developmental Objectives
The student will be able to:
- work problems in bacterial genetics involving transformation, transduction, and conjugation
- design a protocol to clone a gene or obtain a particular mutant using transposons

It may be easier, at least initially, to measure achievement of minimal and developmental objectives using separate exams and assignments for each type of objective. This technique will simplify record-keeping and help you focus more sharply on the different kinds of tasks that are appropriate for assessing the two types of objectives. Test questions and exercises for minimal objectives are relatively easy to create because they assess basic knowledge and well-rehearsed skills. Measuring developmental outcomes is more difficult, for you must not only master the classification systems for complex thinking and reasoning skills but also must be able to devise assignments that measure these skills. There are a number of recent publications that you can consult for suggestions about testing thinking skills, and we have included several in the bibliography at the end of this section. Some writers suggest that novelty is one element common to higher-order learning tasks and therefore assignments that require students to apply their thinking skills in new ways or situations will test complex reasoning.

If your tests and exercises assess both kinds of objectives with reasonable accuracy, you can set performance standards and grade equivalents on a scale. In the example in Figure 11, to pass the course students must master 80% of the minimum essential objectives and 50% of the developmental objectives. Obviously, setting these cutoff points must be done carefully, taking into account the difficulty of the tests and assignments and student performance in previous classes or other sections of the same course. If using this kind of scale seems too difficult, you could use the "total points possible" system instead. By awarding more points for tests and assignments on higher-level objectives and fewer points for tasks on less important objectives, you would still reap some of the advantages of the objective-based method.

Performance Standards — Figure 11

Grade	Essential Objectives	Developmental Objectives
A	90% or more	85% or more
B	90% or more	75 to 84%
C	80% or more	60 to 74%
D	80% or more	50 to 59%
F	less than 80%	less than 50%

No single grading system will be appropriate for all courses at all times, and teachers must be sensitive to differences in students and subject matter when choosing a grading system. It takes time to develop realistic expectations about student performance, and the best teachers re-examine their grading assumptions to verify that their systems are valid. Finally, the accuracy of any grading system depends upon the validity and reliability of measures used to assess student performance, so improving the quality of exams and course assignments will improve the accuracy of the final grades.

Grade Appeals

Page 158 of the 1988-1990 issue of the Undergraduate Bulletin contains the following:

> *If students wish to protest a course grade, they must first attempt to resolve any disagreement with the course instructor. If they fail to reach a satisfactory resolution, they may appeal the grade in accordance with the following procedures. They may submit a written appeal with any relevant test papers, term papers, etc. to their academic dean not later than the last day of classes of the next succeeding semester. The dean will refer their appeals to the administrative board and the chairman of the department concerned. The department chairman will appoint a committee to consider the appeal and will make a recommendation to the administrative board based on the committee's findings. The decision of the administrative board in such cases is final.*

Although most grade appeals are denied, the process is lengthy and usually traumatic for all concerned, so take measures to avoid the problem altogether. The best insurance is to develop specific grading criteria, describe them fully in your syllabus, and follow them scrupulously. Students should be able to calculate (at least roughly) how they are doing during the semester so they will not be surprised by the final grade. Make it clear that students should come to you if they have questions about their course grades. Some teachers schedule mid-semester meetings with students to discuss their progress, their grades, and problems they are experiencing in the course.

Evaluation of Teaching

In the last ten years the evaluation of teaching has become a widely accepted practice in higher education, but methods vary widely from school to school and from department to department. Recent national interest in the quality of teaching in higher education has spawned a movement to include teaching effectiveness in the criteria for promotion and tenure decisions, even in some research universities. Some departments already use teaching evaluations informally in promotion and tenure decisions, usually as a verification that minimum standards are being met. Many departments use evaluations to decide which graduate students will receive teaching assistantships. Try to learn as much as possible about the purposes of the evaluation and the measurement techniques that are used in your department. If you have questions about evaluation, please contact the Center for Teaching and Learning for an appointment to discuss your concerns.

Validity of Student Evaluations

In the last twenty years, researchers have confirmed the stability, consistency, and validity of student ratings of instruction. Most factors that one might expect to influence student evaluations have little or no effect. Neither student characteristics (sex, age, class level), course characteristics (size, subject matter), nor instructor characteristics (sex, rank, age, etc.) have much effect on the outcome, provided the instruments and procedures are sound. Student evaluations do tend to correlate positively with expected grade, but the reason for this is open to interpretation. Recent research indicates that on standardized outcome measures, students learn more from teachers they rate highly, so one would expect that anticipated grades would correlate well with the ratings.

Purposes of Evaluation

Teaching evaluation can be performed for two different (sometimes conflicting) purposes: (1) to provide feedback to the teacher for correction and improvement, and (2) to make decisions regarding promotion, tenure, or merit raises (or, for TAs, more teaching assignments). The first purpose is diagnostic and therapeutic, the second is judgmental and administrative; they are mutually exclusive. If a teacher is shown to have a serious

teaching problem in an evaluation and is not given an opportunity to correct the situation before a decision is made regarding promotion or pay, the evaluation process becomes punitive.

Even if your department is not interested in evaluating your teaching, you have a professional responsibility to do so, since it is the key to teaching improvement. Also, if you are a teaching assistant finishing your graduate career, you may find that student evaluations are required in job applications, especially if the college for which you are interviewing is a "teaching institution." In this period of heightened national concern about the quality of higher education, even research universities have begun to demand proof of teaching ability from prospective faculty.

Types of Evaluation

If you focus on the diagnostic and therapeutic aspects of teaching evaluation, it will help make the practice a natural part of your teaching repertoire. Evaluation for feedback and improvement should be a continuous process from the first day of class. Your daily interactions with students and their performance in class and on tests can provide a stream of information about your teaching. However, systematic data collection provides more detailed information than these informal channels, and it should begin early in the course.

Early Evaluation

Early evaluations enable you to make changes in the course or your teaching before it is too late. End-of-semester evaluations provide an overall measure of your performance and the effectiveness of the course, but they occur too late to benefit the students who fill them out. After several years in school, students often become cynical about teaching evaluations because they never have an opportunity to see if they did any good.

Early evaluations can begin after the first two or three weeks of the semester when things have settled down and students have had a chance to formulate opinions about the course. Soliciting information from your students can be accomplished using formal or informal methods and open-ended or structured questions. You can use any system as long as it is anonymous and students understand the purpose of the exercise.

Stop the class ten minutes before the end of the period and ask them to take out a sheet of paper and draw a line horizontally across the middle of the page. On the top half of the page ask them to list three things they like about the course and they way it is being taught. On the bottom half, they should list three things they would like to change and include practical suggestions for making these changes (note the positive phrasing). Some teachers ask for this information in the form of a "dear teacher" letter. When they are finished, remind them not to sign the papers and ask a student volunteer to collect them.

As you read through the first ten or twelve papers, jot down the categories into which their comments fall. This procedure will help you tabulate comments and keep your attention focused on the most important information. Remember, you are looking for trends and should be most concerned with elements that a *majority* of students comment upon. Don't let a few negative comments overshadow the good responses you receive. (If only a few students complain about some aspect of the course, but their complaints are particularly bitter, try to discover the source of their displeasure.) After you have analyzed their comments, stop the next class ten minutes early to report the results of the evaluation. Cite elements of the course that they liked and indicate if you are going to expand upon or emphasize those things in the future. Explain what you are going to do about things they wanted to change, or explain why you cannot make changes. You don't have to change everything they dislike, but you need to explain why you are not going to make changes.

This simple feedback technique yields a number of benefits: it samples the things that are uppermost in their minds when they think about the course, demonstrates that you are interested in improving the course and your teaching, and opens the way for them to offer comments and suggestions in the future. The effect of the exercise is to initiate a healthy dialogue between you and your students about the teaching process.

Some teachers prefer to use simple questionnaires for gathering early student feedback, especially in large classes. These forms usually focus on a few selected aspects of the course or teaching methods

but also allow for some open-ended commentary. Having students address specific questions about the course is particularly useful if you are teaching it for the first time.

You can conduct simple feedback exercises several times during the semester to assess particular units of instruction, to check on changes you have made, or to get student reactions to new teaching methods. Early, frequent evaluations create an atmosphere in which students are far more likely to speak up when some aspect of the course is causing trouble for them.

Summative Evaluations

End-of-course evaluations can be useful for teaching improvement if the questions are related to specific teaching behaviors. For example, if you were to receive a low rating on the statement "My instructor returns exams and assignments quickly enough to benefit me," you could take steps to improve the turnaround time for grading exams and papers. By contrast, items such as "My instructor stimulates me to think and learn" are not as useful for teaching improvement—if you got a low rating on that item, how would you become more "stimulating?" Figure 12 lists the kinds of questions that are useful for teaching improvement, and you will find more examples in some of the books listed at the end of this section.

Attitudinal items and items that require overall assessments of teaching are appropriate for judging an instructor's general level of performance in comparison to other teachers, but interpretation of the results must be done with great care. For example, if a teacher is asked to teach a course at the last minute it is very likely that his or her performance will suffer. Other factors such as illness or a heavy committee schedule can also result in poor performance. Moreover, research indicates that norm group statistics for comparison of teachers should be based on instructors in related fields—teachers in math should not be compared with teachers in music or history. If statistics for discipline-related groups are not available, figures on teaching performance within the department can be compared.

Summative evaluations should provide quantitative and qualitative data. Although many teachers prefer questionnaires that require lengthy written

Evaluation Questions for Teaching Improvement — Figure 12

1. The teacher speaks audibly and clearly.
2. The teacher makes good use of examples and illustrations.
3. The teacher summarizes important points at the end of class.
4. The teacher displays enthusiasm when teaching.
5. The teacher is available for help outside of class.
6. The teacher does not digress from the main topic too often.
7. The teacher is well-prepared for class.
8. The teacher encourages students to think for themselves.
9. The teacher uses class time effectively.
10. The teacher presents difficult material clearly.
11. The teacher checks periodically to ascertain if students are following the presentation.
12. The teacher is actively helpful when students have problems.
13. The teacher identifies important points in the material.
14. The teacher encourages student questions in class.
15. Tests and exams reflect important concepts in the course.
16. The teacher provides clear instructions for projects and written assignments.
17. The teacher returns exams and other papers quickly enough to benefit students.
18. The teacher makes helpful comments on student tests and papers.
19. The teacher displays a clear understanding of course topics.
20. Course assignments are interesting and stimulating.
21. The organization of the course is easy to follow.
22. The assigned reading contributes significantly to the course.
23. The assigned reading is well-integrated into the course.
24. The teacher has a realistic definition of good student performance.
25. Grades are assigned fairly and impartially.

responses, it is extremely difficult to analyze these kinds of answers, particularly if the class is large. A questionnaire that also provides for scaled responses will make analysis and interpretation easier, since the scales allow you to spot trends easily, and student comments may illuminate the reasons for particular trends in the data.

Peer Evaluation

Your colleagues can provide useful information for improvement of your teaching. Ask other teachers, especially those with more experience, to observe and critique your teaching and offer to do the same for them. They may be able to suggest innovative ways to handle course material, and they can offer advice about aspects of your teaching performance with which you are dissatisified.

You can also ask your colleagues to view a videotape of your class. The Center for Teaching and Learning provides videotaping free of charge. Plan to tape your classroom performance at least once, but preferably twice, so you can check for improvement. You can then ask one or more of your colleagues to view the tape and offer suggestions, and consultants from the Center are also prepared to critique your teaching tape. Videotapes are excellent for reliving the class from the students' perspective (which may be shocking the first time you do it). Obviously, tapes make it easier to spot annoying mannerisms and verbal tics, but they also make it possible to analyze the flow of the class and identify teaching techniques that work well and those that need improvement. Remember, however, that videotapes show only classroom behavior (and only in one or two classes)—they don't show how you interact with students in your office, how well your exams test the material, or how well-designed the course is. Student evaluations and critiques by colleagues are necessary if you want a complete picture of your strengths and weaknesses.

Students can report what happens in your class from day to day, how closely your tests match the course material, whether the course is logically organized, and similar aspects of your teaching. They cannot judge how much you know about the material or how wisely you have chosen the material to cover—only your department colleagues can make those determinations.

General Rules for Evaluation

A few rules regarding evaluation procedures should always be observed:

1. End-of-semester evaluation questionnaires should be administered during the last week of class, never during the final exam. If you give it before the exam, students often resent having to spend the first part of the period, when they are fresh and ready for the exam, for something not related to the test; if you ask them to fill it out after they finish the exam, they are usually tired and in a hurry to leave and will not consider the evaluation questions very carefully.

2. Students should have adequate time to fill out the forms, at least 20 minutes for an average questionnaire.

3. Anonymity should be guaranteed on all student evaluations.

4. End-of-semester evaluations should not be examined by the teacher until course grades are officially recorded.

5. The teacher should leave the room when students are filling out evaluations (research has shown that students tend to give higher ratings if the teacher is in the room when the form is administered).

6. When colleague observations are used for general evaluations or for promotion and tenure decisions, the observers should be trained to use a checklist or similar instrument to foster inter-rater reliability. They should also meet with the teacher to discuss his or her approach to teaching, observe the class several times, examine course materials and tests, and write a report summarizing their findings.

Further Reading

Evaluation of Learning

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Instructional Roles

There are many roles and relationships involved in university teaching, and these may have more of an effect on your success than your techniques. Faculty members and teaching assistants must frequently work together as a teaching team, and both must deal with students on a personal and professional level. This chapter addresses these important teaching roles and provides guidelines for dealing with these relationships.

TA Responsibilities

Teaching assistants are an indispensable part of instruction at UNC. They teach a substantial portion of the undergraduates (50% of freshmen) and, as graders, discussion leaders, lab instructors, and in other support roles, they make valuable contributions to courses taught by the faculty. Because the authority to define TA job responsibilities and benefits has been delegated to individual departments, there are no job guidelines that apply to all TAs across departments. The department determines job responsibilities, the

number of work hours expected, salary, period of employment, job title, and other specifics. A faculty supervisor may also add or delete TA duties. There are four types of teaching assistantships: Graders, Discussion Leaders, Lab Instructors, and Full-Course Teachers.

Grading

Although it is one of the least glamorous jobs, grading is also one of the most important (and most difficult). Grading exams and papers for a course that you are not teaching presupposes a great deal of coordination with the faculty member in charge. Graders often assist in the construction of exam questions, which requires an intimate knowledge of the course and the teacher's intentions. Graders may also be asked to keep records of student grades, meet with students who have questions about their grades, and calculate final grades.

Leading Discussion, Recitation Sessions

Typically, discussion sections are scheduled for large classes to provide opportunities for greater student involvement. Discussion sections are held to allow time for questions, to discuss the week's lectures, or to work through sets of questions related to the lecture. Other types of sections have specific content objectives, and the TA is expected to teach the material through lecture or other means. As with grading, discussion leading requires a great deal of coordination with the teacher responsible for the course. Usually the discussion leader must also grade students in his/her section, either for participation or for more substantive levels of performance. In some departments the discussion leaders are also expected to share grading duties for the entire course.

Lab Instruction

Laboratory instructors in the sciences fulfill somewhat the same function as discussion leaders in other fields, but their duties are usually more well-defined. Lab instructors are responsible for performing experiments or demonstrations that are essential to course work in the large sections. Often the TA supervises students as they perform experiments or complete exercises from a lab manual. The degree to which the lab work is integrated with other course work affects the TA's job, and if the coordination is poor or the lab manual inadequate, a conscientious TA will try to compensate for these shortcomings. Finally, lab instructors are also responsible for the physical safety of their students, and must teach lab safety as well as academic content. Laboratory science departments supply the *UNC Laboratory Safety Manual* to lab assistants, and additional copies are available from the Health and Safety Office.

Full-Course Teaching

Teaching a course independently is one of the most rewarding experiences for a TA. It is also a heavy responsibility because the investment of time is greater than most TAs expect. Fortunately, these assignments are not usually given to inexperienced or untrained TAs. Beyond content expertise, full-course teaching requires knowledge of teaching strategies and procedures and an appreciation of the abilities of students taking the course. In special cases such as studio instruction in the fine arts and freshman English, students require more individual attention than in other courses and the experience tends to be more rewarding for both teacher and student.

Working With Teaching Assistants

Although coordination and supervision of TAs are important topics in themselves, attention must also be paid to the training of teaching assistants. Training programs for teaching assistants exist in only a few departments at UNC, and even where training is available, graduate students often work several semesters for individual faculty members before they receive any formal teaching preparation. For many TAs, the only opportunity to learn basic teaching skills is with the course professors for whom they grade or lead discussions. We believe that faculty have a responsibility to prepare TAs for their teaching duties, not only to ensure high quality classroom instruction, but also to prepare them for teaching careers when they finish their degrees. Increasingly, college search committees are requiring job candidates to show evidence of their teaching ability, so departments can improve placement of their graduate students by providing training and practice in teaching. If, as a faculty member, you feel that

training is beyond the scope of your responsibility, perhaps you can persuade your department colleagues to establish a training program for TAs. The staff of the Center for Teaching and Learning will provide information, assistance, and material support to departments that wish to develop TA training programs.

Many faculty members maintain that we follow an apprenticeship model of training in graduate education—graduate students learn their vocation through practical experience, working under the supervision of skilled masters. Unfortunately, we often fail to provide the kinds of structured experiences that are necessary for the model to work effectively. A true apprenticeship system requires (1) a ladder of experience that the neophyte must climb, leading from simple tasks to more complex ones, (2) careful instruction at each stage of the work by a master, (3) evaluation of the apprentice's work and growing skill level, and (4) certification that the apprentice has mastered the work.

To adapt the apprenticeship model to the task of supervision of TAs, four activities are important:

- *Defining the TAs' tasks* as specifically as possible,
- *Defining the relationship* you will share,
- *Providing advice, training, and support* as they learn, and
- *Providing feedback and evaluation*.

Defining Tasks

All new TAs experience anxiety about their jobs because it is usually the first time they have to assume the role of teacher after having been students all their lives. Moreover, many new TAs simply don't know what their basic responsibilities will be. A job description is an excellent way to summarize the job and how it should be performed. A job description should clearly establish the parameters of freedom and responsibility within which the TA will operate (see example in Figure 13). One UNC department uses a TA contract that describes the job, is signed by the supervisor and the TA, and is filed in the department office.

Job descriptions alleviate TA anxiety and provide the foundation for evaluation of TA performance. As part of their introduction to the job, TAs should be told how their work will be monitored and evaluated, and how that process will help them become better teachers.

Discussion Leaders, Lab Instructors, Graders

Before the semester begins, meet with your TAs to discuss the job description and to emphasize duties that you feel are particularly important. Review the course syllabus and show them how their work fits into the course and how objectives in lab or discussion sections relate to course objectives. Introduce new TAs to others who have assisted you in the past and encourage them to help one another. Encouraging the informal flow of information among TAs can save new TAs from making common mistakes and reduce the amount of time you will have to spend initiating new TAs into their roles. During the semester, let the TAs know well in advance of changes in the course schedule or departures from original objectives.

TAs With Full Course Responsibility

If you are supervising TAs who teach independently, you need to provide more comprehensive training, and the process should begin the semester *before* they teach. You have a responsibility to the undergraduates in their courses to insure that the TAs under your care have been well-prepared for the task. This handbook, distributed to all new TAs, can provide the outline for such a course. The staff of CTL will help locate additional source material and develop a tailor-made program for you. Such a plan requires that you meet with the TAs regularly and work with them as they develop their course designs. It is a good idea to provide sample syllabi and materials they can use and to schedule sessions in which they share course materials and test questions they have developed.

Defining the Relationship

When you are assigned teaching assistants, you assume the dual roles of supervisor and mentor, roles that will inevitably shape the relationship you will have with those TAs. If your TAs are graders and discussion leaders, they also share a relationship with the students in your course, which adds another dimension to your affiliation. TAs can serve as your eyes and ears in the classroom and identify elements of the course that are working and those that are not. Soliciting and using their ideas for improving the course is a

TA Job Description

Figure 13

Job Title: Teaching Assistant, Geography 10

Reports to:

Salary:

Educational Requirements: must have been admitted to the Geography Department Master's or Ph.D. program and been granted TA funding.

Job Requirements: Basic knowledge of physical geography is required. Familiarity with a PC spreadsheet program such as Lotus 1-2-3 or MSWORKS (or willingness to learn) is neccessary.

Duties: The TA will:
- check with the instructor 15 minutes prior to class to determine AV and map requirements
- physically set up the classroom (hang maps and set up the overhead or slide projector).
- attend all lectures
- grade homeworks, quizzes, and exams (the TA will do approximately 1/2 of all grading during the semester)
- hold scheduled office hours three hours per week to counsel and tutor students
- maintain the class roll
- publish grades weekly
- lecture at least twice during the semester, and be videotaped once
- review the videotaped lecture with the course instructor and a CTL staff member
- write five exam questions per chapter of the textbook, and ten exam questions for each lecture the TA gives
- hold review sessions prior to each exam
- monitor quizzes and exams
- perform other duties as assigned. Total work load will not exceed 12 hours per week.

Performance standards:
- The TA will notify the instructor in advance if he or she cannot be present for class.
- The TA will grade assignments, quizzes and exams in time for them to be returned at the next class meeting.
- The TA will post a notice in advance if he or she cannot keep scheduled office hours. The notice will include the time of a rescheduled office session.

good management technique, because it demonstrates that teaching is an evolving craft that can always be improved, and that you value their insights as developing teachers.

If you are supervising TAs who are independent teachers, the relationship will be different—perhaps more collegial—but will remain one of master to apprentice (or perhaps master to journeyman). Remember that even experienced TAs can get into trouble and they need to know that you are available for help and support.

Questions to Consider

- Do you see yourself primarily as a supervisor whose main task is to make sure that the job gets done, even if it means making all decisions by yourself?
- Do you see yourself primarily as a mentor whose main task is to provide advice and encouragement, even if the job doesn't always get done as well as you would prefer?
- Do you see your TAs as junior colleagues, and if so, how will that perspective affect your supervision?
- Do you think it is important to help your TAs achieve a measure of independence and self-fulfillment in their jobs?
- Do you feel that your TAs should have meaningful input into the design and teaching of your course?
- How will you show your TAs that you respect them as professionals-in-training?
- How much time are you willing to put into supervision and mentoring? Realistically, how much time can you devote to those tasks?

Providing Support, Advice, & Training

Regular meetings with your TAs are indispensable for coordinating their work and addressing problems and concerns as they arise during the semes-

ter. You can use some of the meeting time to explain common student difficulties with upcoming material and suggest specific ways TAs should approach it in their discussion sections. You should also explain the instructional purpose of each discussion-section meeting and suggest teaching strategies that will achieve these objectives.

Regular conferences also provide opportunities for TAs to share particularly successful teaching techniques. Many times TAs develop original and effective methods on their own, but unless these ideas are shared, only a few students will benefit. These meetings are an appropriate forum in which to bring up suggestions for improving the course and for passing on information about how well students are handling difficult parts of the course (and what might be done to help them).

If your TAs will be expected to help write and grade exams, plan to talk about your testing technique and grading criteria at these meetings. Ask TAs to bring in sample test items and have the group discuss ways to improve them. If you are using essay tests, ask the TAs to write model answers for each question and discuss their answers. Writing model essays can identify weaknesses in the questions, helps to determine if questions can be answered adequately in the time allotted, and provides a convenient scoring guide for the test. Whether or not the TAs contribute to the construction of exams, it is essential that they all understand and agree upon the grading criteria if they are to grade exams fairly and accurately.

One of the most common problems in using TAs as graders is insuring uniformity across graders. It is not advisable for TAs to grade the papers of their own discussion sections, at least not exclusively, because of the temptation to reward (or punish) students in their sections. Some supervisors require each TA to provide samples of "A," "B," "C," "D" and "F" papers for the professor to re-check. Others require TAs to grade papers together, in the same room, and have them compare their "A," "B," "C," "D" and "F" papers. In this way, the more experienced TAs teach the less experienced ones about grading, and in the process of discussion any disagreements about the criteria are worked out by consensus. If you choose this strategy, it is advisable for you to be present at least at the beginning of the grading session in case you need to clarify any of your expectations about the test or the grading process.

If you are supervising TAs with full course responsibility, regular meetings are still necessary because problems that arise can be even more serious and difficult than those that crop up in discussion sections. For example, some TAs who are teaching for the first time impose impossibly high standards on their students. Even if their classroom technique is good, their students can be frustrated, angry, and demoralized if they feel the grading scheme is unfair. Other TAs may set very low standards and give high grades in the belief that they will get higher student evaluations. Some TAs become so fascinated with teaching (and, if they are successful, addicted to undergraduate adulation) that they spend inordinate amounts of time on their courses, to the detriment of their own graduate programs. TAs in these situations need your help to solve the problems and grow in their new role.

Training Activities

Teaching is a skill, and the only way to acquire a skill is to practice it. Over time, TAs should have the opportunity to practice all tasks associated with teaching, not just grading or leading discussions. Some large departments have TA career ladders: TAs begin as graders, move up to discussion section leaders, and finally assume full course responsibility. Although this isn't practical in every department, faculty supervisors can involve their TAs in a variety of teaching activities within their own courses.

For example, you could choose three or four classes during the semester that exemplify particular teaching techniques and use them as models for your TAs. Meet with your TAs the day before a particular class and explain what you hope to accomplish and how you plan to do it. You might wish to focus on one element of teaching at a time, such as how to encourage student participation or how to deliver a stimulating lecture. After the TAs have observed the class, meet with them and discuss their impressions of the strategies that you used and whether or not they were successful.

Your TAs should have the opportunity to put their new knowledge into action as soon as possible. You might let them lead the next set of class discussions and observe their techniques. The same process could be repeated for lecturing or any other technique that you normally use in your courses. In any case, provide immediate and balanced feedback about their performance, mentioning both strengths and weaknesses. All of your comments should be directed toward helping them improve their classroom techniques and develop their teaching styles.

Providing Feedback and Evaluation

TAs should know how their work will be monitored and evaluated. Let them know that you see them as apprentices at teaching, and that you don't expect them to know everything about the job. Make sure they understand that the purpose of evaluating their performance is to provide feedback that will help them improve as instructors, and not to grade or punish them.

Observations

Plan on observing your TAs at least once during the semester, but if you can afford the time, two or more observations, spaced well apart, would be better. TAs should know in advance the dates on which they will be observed (their day to day performance will not differ markedly from the times that they are observed, and knowing the dates will help alleviate anxiety).

Another way to observe your TAs in action is to arrange for them to be videotaped, a service offered free of charge by the Center for Teaching and Learning. A CTL technician will tape the class and give the tape directly to the teacher afterward. TAs can review their tapes privately, using a checklist supplied by CTL to evaluate their performance. The checklist is also a teaching device, because the questions are all based on effective teaching practices. You can view the tapes at your convenience and meet with TAs individually to discuss their techniques. TAs can also request videotaping from CTL on their own and, if they like, discuss their teaching with a member of the Center staff.

Observations are most useful when they focus on specific activities, and feedback that is concrete and specific will be more useful to TAs than generalized statements about their performance. It is a good idea to use a checklist or other standard form when observing your TAs (in person or on tape) so that you focus on the most important elements of their teaching. As with all forms of evaluation, TAs should be given a copy of the form before they are observed so they know the criteria on which they will be judged.

In some departments, TAs organize their own informal peer observations and even show each other their videotapes. This approach allows TAs to get feedback and advice in a non-threatening environment, but is insufficient for training purposes and should be used in conjunction with observations by the supervisor.

Self-Evaluations

Learning to be reflective about one's profession is part of the process of socialization that occurs in graduate school. Although we try to develop this skill in our graduate students with regard to research, we may forget that they should also learn to regard their teaching in the same light. You might begin the process by suggesting that your TAs spend five minutes after each class session writing down the successful elements of their classroom performance and what they would do differently next time. They could note points where they need to add examples or fuller explanations, where student understanding seemed to be weakest, and what actions they could take to improve that class session. These notes could be the basis for a teaching journal that you review with them at the end of the semester. A journal might also include their reflections and insights about teaching, which would help them formulate a personal philosophy of teaching. In the last section of the journal they could set specific goals for improvement in their next TA assignment.

Having TAs fill out the same evaluation instrument that their students use is another method for stimulating self-examination of teaching. Any large discrepancies between the instructor's ratings and the students' ratings will signal the need for closer examination of those elements by the teacher. Sometimes the discrepancies indicate a need to change teaching strategies, and, as supervisor, your role is to help the TAs interpret the data and provide suggestions for changes.

Early Evaluations

Traditionally, student evaluations are administered at the end of a course, when it is too late for the teacher to change anything. It is particularly important for new teachers to get earlier feedback from their students so that they can make adjustments in the structure of the course or their teaching methods. The best time to conduct such an exercise is about one-third of the way into the semester, when both the teacher and the students have settled into the course routine. The evaluation chapter of this handbook provides a more detailed treatment of student evaluations, including ideas for early evaluations.

End-of-Course Evaluations

There are many types of student evaluations in use in higher education today. Most universities have specific forms that teachers are required to use, but at UNC each department can decide on the form to be used and the circumstances under which it will be applied. If you decide to use your department's form for your TAs, you should give each of them a copy of the questionnaire before the semester begins. If you prefer not to use your department's form, the CTL staff can develop one to suit your needs.

Whichever form you use, reviewing the results of student evaluations with your TAs should be part of the training process. You can help them identify areas of teaching they need to work on and discuss their approaches to teaching in the context of their student ratings. In some departments, student evaluations become part of a TA's record, providing documentation for letters of recommendation. Increasingly, search committees are asking for such documentation of teaching competence, so establishing a teaching portfolio can be advantageous for graduate students.

In this section, we have suggested a number of strategies for supervising and training teaching assistants. You can decide which strategies best match your teaching situation, conditions in your department, and the needs of your TAs. Keep in mind, however, the four parts of your job as supervisor: defining tasks, defining the relationship, providing support, and giving feedback.

Working With a Faculty Supervisor

In some departments, a course coordinator supervises a group of TAs who teach sections of the same course (or a related set of courses), but most TAs are assigned to work for a particular professor in one or more of that professor's courses. In either case, the kind of relationship you have with your supervisor will affect your performance as a TA.

If you are working as a discussion leader or grader, having a clear definition of your duties is critical. If you don't ask questions, the course professor will often assume that you know what you are supposed to do. Try to get your duties in writing to reduce the chances of misinterpretation. Ask for precise answers about:

- the purpose of discussion sections and the amount of freedom TAs have to choose methods and content,
- if you will be required to attend lecture sessions, and if so, what your duties will be,
- the extent TAs will be involved in exam writing and grading,
- student attendance requirements,
- how you can get information on teaching techniques and opportunities for practice,
- the kind of teaching (lecture, discussion, recitation) TAs are expected to do,
- methods for feedback and evaluation of TA teaching (especially videotaping).

In addition, regular meetings with the course professor are indispensable for handling problems and concerns as they come up during the semester. The professor can use some of the meeting time to explain common student difficulties with the upcoming content and can suggest specific ways TAs should teach it. If TAs will be responsible for helping develop exams, these meetings should also explore testing techniques preferred by the course professor and specific criteria used for grading test items. The course professor should help TAs develop a grading plan that standardizes criteria across sections to reduce grading variations. In some situations, TAs are

allotted a small percentage of the final grade to reflect class participation in their discussion sections; criteria for this grade should also be worked out with the course professor.

With regular meetings, the supervisor can handle situations which arise between and among TAs in the course. For example, some TAs may give their sections higher grades to give their students an edge; some TAs may simply cancel class arbitrarily; some TAs will work harder than others, holding special review sessions, giving extra handouts, and tutoring students who are having difficulties. These issues must be handled quickly so they don't undermine TA morale or create inequities for the students.

If regular conferences are not scheduled by the professor in charge, you might suggest that such meetings be held, citing the reasons given above. Even if the course professor does not wish to meet, there is no reason the TAs themselves could not confer regularly to work out course problems and share teaching insights, as long as the professor is aware that the meetings are taking place.

The Relationship Between Student and Teacher

The roles of teacher and student seem simple and straightforward, but to be a successful teacher, there are ambiguous areas in the relationship that you will need to define. The relationship has been compared to that of lawyer and client or doctor and patient—the teacher is an expert providing a special service to clients who should be treated with professional courtesy and respect. However, good teaching also requires the development of a personal interest in students, so teachers must balance detached professionalism with personal friendship. Perhaps the traditional ideal of "Mark Hopkins on one end of a log and a student on the other"remains the best goal for us all.

New Teachers

If you are a graduate student or a new assistant professor, you are probably closer in age to undergraduates than the majority of faculty members, and this condition can work for you or against you in your teaching. You are more likely to share some of the undergraduate's values, interests, and tastes, giving you an edge in communicating with them. On the other hand, it may be more difficult to distance yourself from them and avoid becoming a "buddy." Eventually, you will have to evaluate their work and assign grades, activities which are difficult enough without the ethical burdens imposed by this kind of relationship. Teachers should strive for an arm's length distance from students — close enough to be helpful and friendly, but far enough away that you don't feel any inappropriate obligations to them.

As a new teacher, there is a possibility that your insecurities about teaching could affect your relationship with students, but you will soon discover that most of your fears are groundless. For example, stage fright usually evaporates by the end of the first week as you learn your students' names and the class is no longer a room full of strangers. Some new teachers are afraid that students will ask questions about the material that they can't answer, but in fact this rarely occurs. If you don't know the answer to a question, admit it and promise to provide the answer in the next class—they will respect your intellectual honesty (but be sure to follow through on your promise to preserve your credibility). Similarly, UNC students are not generally unruly in class and they are rarely rude or challenging to their instructors; indeed, the problem is not how to handle unruly students but rather how to arouse their intellectual curiosity and encourage discussion and debate. Remember, you begin each semester with the good will and respect of your students. They will forgive many mistakes if you show them you care about their success in the course and try to be just and fair in your evaluation of them.

Balancing Personal and Pedagogical Roles

Your relationship with students should focus on facilitating learning, not on developing social ties, but there are many arenas in which learning can take place. For instance, if students want to continue a discussion in the snack bar after class, it can be an excellent opportunity to expand your teaching role beyond the limits of the classroom

and also get to know students better. Be cautious, however, in meeting students for purely social pursuits, since social interactions tend to encourage the confiding of personal problems and the development of more intimate relationships. Remember, for most students the college experience is their first time away from home, and the university is a large, unfamiliar institution. Many students are seeking the kind of intimacy and caring they enjoyed back home, and if you try to meet their emotional needs you may find yourself drawn into inappropriate relationships. Listening to their personal problems with sympathy and understanding helps them handle the stress of school, and counseling a student in this way once or twice is probably appropriate. But if the student makes it a weekly ritual, it may be difficult for you to exercise good judgment about making exceptions to course requirements or assigning grades.

In your attempts to distance yourself from your students, avoid becoming too authoritarian. Students already see teachers (at least initially) as authority figures, so the role can easily be overplayed. Being too rigid is just as bad as being too flexible. Beware also of trying to impress students with your erudition—they know so much less than you about your subject that you will only appear pedantic or even pompous. A danger sign of this condition is the tendency to ridicule students' questions and comments. Ridicule and sarcasm will quickly alienate the class and stifle any student incentive to engage in dialogue.

Despite your best efforts, you should accept the fact that, for one reason or another, you may develop personality conflicts with a few students. If this happens, remember that the classroom is not an appropriate place to air these conflicts. As soon as you become aware of the problem, try to settle it with the student one-on-one, preferably in neutral territory such as the cafeteria.

Another part of your role as a teacher involves advising students on various problems. Although it is natural to want to help others in need, you should try to make a distinction between problems related to schoolwork (about which it would be appropriate to provide advice) and personal problems (about which it would be inappropriate to offer advice even if you were a trained counselor). In other words, if a student is not performing well because of poor study habits, you can suggest ways to improve those habits, but if a student comes to you for advice about emotional problems (e.g. depression, anxiety, phobias), listen sympathetically and refer them to the Student Health Service or the Counseling Center. For more specific information on referrals to student support services, consult the *Campus Resource Guide* published by CTL.

Finally, be flexible about deadlines or course requirements in the face of extraordinary circumstances, but be firm when confronted by importunate appeals to your soft heart. For example, if a student misses a test because of a medical problem, death in the family, car accident, or similar unanticipated emergency, he or she should be allowed to make up the test (or perform some equivalent task such as writing a paper) given appropriate verification of the emergency. If verification is not possible, you will have to use your judgment about the student's honesty based on previous performance in class and what you know about him or her (another good reason to get to know your students personally). On the other hand, missing a test because he or she decided to stay at the beach an extra day after Spring Break cannot be justified by any amount of pleading.

Cheating

Cheating raises special problems in the relationship between teacher and student because it is both a breach of trust and a violation of the educational contract. Surveys suggest that an overwhelming majority of undergraduates have cheated at some point in their academic careers, and, in spite of all precautions, every teacher will eventually have to confront the problem. Nevertheless, there are things you can do to prevent cheating. Experts who have studied the problem generally agree that students are more likely to rationalize cheating if the teacher appears indifferent about testing practices, if the class is large and the conditions impersonal, and if the stakes are high and the risks are low.

Common sense dictates that tests should be monitored, especially in large classes, and that reasonable care be taken to remove temptation. For

example, you can distribute two or more different forms of the same test and spread students out with empty desks between them. Using the same tests year after year is an invitation to cheating, since it is impossible to insure complete test security (as many fraternity files prove).

Cheating occurs less frequently in smaller classes, and some authorities suggest it is because the atmosphere is more personal and students feel greater constraints against violating the teacher's trust. It is possible to establish such a relationship even in large classes, as some teachers at UNC amply demonstrate, and thereby improve teaching effectiveness and help prevent cheating at the same time.

Poorly-designed tests and written assigments can also foster cheating. Exams that are tricky, require recall of vast amounts of factual information. The focus on obscure facts in the text *invite* cheating because, from the students' viewpoint, the teacher is not playing fair. Exams should assess the achievement of important course goals, not the ability to memorize facts or to see through trick questions. Questions should follow the guidelines for educational measurement outlined in the handbook section on testing. If you assign massive research papers without providing for a periodic review of student progress in the form of outlines, bibliographies, and first drafts, you make plagiarism easy, if not inevitable.

Beyond tests, students truly may not understand what is meant by cheating. Teachers often hold different opinions on the subject, and if students are told it is all right to help each other on a writing assignment in one class, they may think it is fine to do so in every class. Plagiarism is a particularly thorny issue, because teachers in different fields may themselves disagree about the exact definition. To prevent any misunderstandings, it is wise to include in your syllabus a definition of plagiarism and a discussion of the boundary between cheating and fair help in course assignments.

Removing conditions that foster cheating will help prevent widespread dishonesty but won't eliminate the problem altogether, so you should be aware of the procedures for handling violations of the Honor Code at UNC. The Instrument of Student Judicial Governance sets forth very specific rules for dealing with cheating, and it is important to note your responsibility under the system. For example, if you have evidence that a student has cheated, you *cannot* handle the matter yourself; it must be reported to the Office of Student Affairs or the Student Attorney General as an Honor Code violation. The Honor Court will determine the nature and extent of the punishment, if any. (Of course, you should talk to the student about the matter before reporting the violation.) We have reproduced important parts of the Instrument of Judicial Governance in this handbook, including the section on Faculty Responsibility, but you can get a complete copyby contacting the Office of the Dean of Students.

Personal Relationships

Most of the rules regarding relationships between a teacher and student are common sense. Teachers should never, under any circumstances, date their students (even if the student initiates the idea). A male teacher should never meet a female student in seclusion and should always leave the office door open when talking to a female student. Teachers should not make sexually suggestive remarks to students, even facetiously. These kinds of transgressions could be violations of the University's sexual harrassment policy. A copy of the policy is available in each academic department, and we have included a portion of it in the chapter on University Policies and Guidelines.

Occasionally a student will develop an infatuation with a teacher, either as a romantic interest or as an academic role model. This situation can give rise to damaging rumors and even hurt your academic career, so it is important to treat the problem when it first arises. Initially, the symptoms of infatuation may be difficult to detect, especially if you are accustomed to having students consult you frequently outside of class. However, if you discover that a particular student takes up most of your office time, frequently calls you at home, and arranges to be in your path when you cross campus, you should take action to reduce the intensity of that interest.

Become less available to the student by restricting the time you allow him or her to spend in your

office and by keeping telephone conversations to one or two minutes (an answering machine can help you screen calls). When talking to the student, be extremely businesslike and detached and discourage social talk. Let other teachers know about the problem and how you are dealing with it, since they may have suggestions for handling the situation and disclosure will help squelch incipient rumors. If you find you must raise the problem directly with the student, be sure to use a sensitive but firm approach. Explain your professional role and the responsibilities of both teacher and student. Show the student that you care for him or her as a student, but clarify the limits of your caring. If psychological counseling seems necessary, offer to arrange it with the appropriate agency.

Sensitivity to Student Characteristics

Teachers should treat all students with courtesy and dignity, regardless of gender, race, class, sexual orientation, religion, nationality, politics, or other personal attribute. Higher education is committed to the principle that intellectual debate should occur free from reference to the personal characteristics of the debaters, and if a student is embarrassed, demeaned, or debased by something that a teacher does, education has been poorly served. Telling sexist jokes or discriminating against students in grading because of their religion are examples of blatant insensitivity or prejudice, but there are more subtle forms of bias, both conscious and unconscious.

For example, research has shown that male professors have a tendency to call on male students more often, to ask them higher-order questions, and to wait for answers from them longer than they do for female students. White professors have been known to confuse the names of black students in their classes for an entire semester. These problems may be just as damaging to education as the more flagrant violations mentioned above. None of us is free from prejudice, but we should strive to eliminate it from our classrooms.

If you would like to know more about these issues, the books and articles listed below are a good place to start.

Further Reading

Faculty and TAs

Andrews, J. D. W. (Ed.). (1985). Strengthening the teaching assistant faculty. *New Directions for Teaching and Learning*, No. 22. San Francisco: Jossey-Bass.

Fink, L. D. (1984). The first year of college teaching. N*ew Directions for Teaching and Learning*. No. 17. San Francisco: Jossey-Bass.

Nyquist, J. D., Abbott, R. D., & Wulff, D. H. (1991). *Preparing the professoriate of tomorrow to teach: Selected readings in TA training*. Dubuque, IA: Kendall-Hunt.

Relating to Students

Belenky, M. F., Clichy, B. M., Goldberger, N. R., & Tarule, J. M. (1986). *Women's ways of knowing: The development of self, voice, and mind*. New York: Basic Books.

Bess, J. L. (1973). Integrating faculty and student life styles. *Review of Educational Research, 43*, 377–403.

Cones, J. H., III, Noonan, J. F., & Janha, D. (Eds.). (1983). Teaching minority students. *New Directions for Teaching and Learning*, No. 16. San Francisco: Jossey-Bass.

Erickson, B. L., & Strommer, D. W. (1991). *Teaching college freshmen*. San Francisco: Jossey-Bass

Kamarovsky, M. (1985). *Women in college: Shaping new feminine identities*. New York: Basic Books.

Pascarella, E. T. Student-faculty informal contact and college outcomes. *Review of Educational Research, 50*, 545–595.

Perry, W. G. (1970). *Forms of intellectual and social development in the college years: A scheme*. New York: Holt, Rinehart, & Winston.

Robinson, G. M., & Moulton, J. (1985). *Ethical problems in higher education*. Englewood Cliffs, NJ: Prentice-Hall.

University Support Services

There are many types of services and resources on campus to help you with all aspects of your teaching: course management, course organization and teaching, and special academic or personal needs of students. There are professional support services as well, but this section will focus primarily on teaching support services.

Related campus services are seldom grouped under one organization, and frequently each group operates with a certain amount of autonomy, so types of services and the focus of services may change over time. Frequently you may need to look to more than one unit or source for the types of resources that you need, but several guides exist to help you with that task.

Campus Resources: A Contemporary Guide for the Perplexed UNC Teacher is published by the Center for Teaching and Learning. The guide is organized around ten topics related to teaching, such as "Developing and Evaluating Teaching Techniques

and Course Organization," "Classrooms," and "Responding to Student Problems and Needs." Using a question-answer format, this guide directs the reader to specific services available in both Academic Affairs and Health Affairs.

The Divisions of Academic Affairs and Student Affairs publish a guide called *The Source: A Resource Handbook for the University of North Carolina at Chapel Hill*. Though written primarily for students, this guide provides useful information for instructors as well. Topics are listed in alphabetical order and range from "Academic Advising" to "International Programs" to "Tutoring."

Another general guide is the section entitled "Departments and Organizations" in the University Telephone Directory blue pages. Support services are listed by department and by academic unit, and while this may not be the quickest source for finding assistance, it does provide the most current list of support services' addresses and telephone numbers.

Following is a general list of services in Academic Affairs that currently exist to assist you with different aspects of your teaching.

Course Management

- *Ordering textbooks*: UNC Student Stores
- *Producing coursepaks*: local copy centers listed in the Chapel Hill Telephone Directory (See copyright information on page 76.)
- *Placing materials on reserve*: Undergraduate Library
- *Computer scoring of exams and test item analysis*: Office of Information Technology
- *Specifying classroom needs*: department administrator in charge of classroom scheduling
- *Electronic class rolls*: Center for Teaching and Learning, or Office of Information Technology
- *Registration and enrollment check*: University Registrar and administrative offices of individual departments
- *Technical support*: Office of Information Technology—Classroom Hotline

Student Academic and Personal Support Services

As you work with students, you may discover that some have special academic or personal concerns. The following campus services exist to help students with their particular academic and personal concerns. You may contact either the service for assistance or refer students directly.

Academic Support Services for Students

- *Academic advisors*: General College and the College of Arts and Science and individual professional schools
- Learning Skills Center
- The Writing Center
- Handicapped Student Services: Division of Student Affairs
- Learning Disability Services
- Minority Student Advisors
- *Tutoring Programs*: College of Arts and Sciences; Student Government

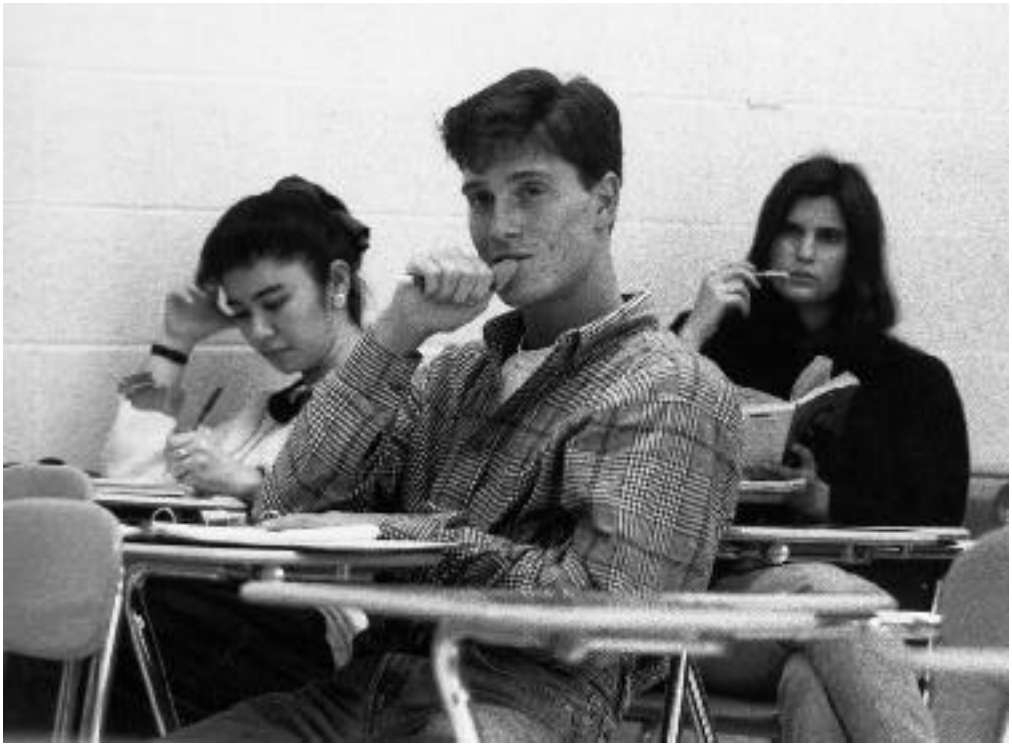
Personal Support Services for Students

- Student Development and Counseling Center
- International Student Center
- Student Legal Services
- Student Health Services

Teaching Support Services

If you are looking for assistance for planning courses, ideas for teaching, teaching materials including films and videotapes, bibliographic help, evaluation, or other teaching support, investigate services offered by the following organizations:

- Center for Teaching and Learning
- University Libraries
- Health Sciences Library
- Office of Information Technology
- a.p.p.l.e.s. (service learning program)



University Policies & Guidelines

Institutional policies and procedures relevant to teachers fall into two categories: (1) specific policies and procedures that apply to in-class instruction and (2) general University policies. On the following pages are detailed descriptions or excerpts of these policies and procedures. In some cases we have provided general guidelines because no policy has been articulated by the Faculty Council or University administration. Take some time to become familiar with this information because as an employee of the University you are expected to know and follow these guidelines.

Policies and Procedures for Classroom Instruction

Faculty Rights and Responsibilities

The following description of the instructional role of the faculty is excerpted from a Faculty Council statement adopted on September 10, 1971:

The Faculty Member as a Teacher-Scholar

1. A faculty member's professional and moral right to teach rests upon mastery of his subject and competent scholarship. He has an obligation to keep abreast of the main currents in his field and to incorporate these into his teaching.

2. The principles of academic freedom, long accepted by this University and its faculty, entitle him to the privilege of organizing his subject matter in such ways and presenting it by such methods as, in his considered judgment, will have optimum value for his students, subject to such guidelines as are reflected in departmental, school and other faculty policies, and subject to the obligation to require an amount and quality of work from his students which, under this University's standards, justify the course.

3. He is obligated, in general, to present the pre-announced subject matter of his course, and he should rarely inject material irrelevant thereto.

4. He should allow his students the freedom of inquiry that he demands for himself, should make them aware of viewpoints differing from his own, should carefully distinguish between fact and opinion, and should never require agreement on debatable matters as the price of academic success. He should encourage his students to develop the capacity for critical judgment and to engage in a sustained and independent search for the truth in and out of the classroom.

5. His students should have priority in the allotment of his time.

6. He has a duty to provide promptly such evaluation of the work of each student as is required by relevant faculty policies. This evaluation must be based upon academic performance professionally judged and not upon such irrelevant matters as personality, sex, race, religion, degree of political activism or personal beliefs. The automatic assignment of the same grade to an entire class or the arbitrary assignment of a fixed percentage of students to each grade level is an unacceptable practice.

7. He has an obligation to respect the rights of students, including, in the absence of exceptional circumstances, an obligation to respect student confidences shared with him.

8. He has the right to pursue any research or artistic endeavor that he deems to have potential value, subject to appropriate safeguards where the research involves the physical well-being, mental process, or confidences of living persons. Because open access to knowledge is of the essence of a university, at an appropriate time the results of university research should be made available to society for appraisal and use.

Faculty Handbook
1985, as amended

The Student Instrument of Judicial Governance

UNC operates on a system of student self-governance. As an instructor, you have a responsibility to bring suspected infractions of student conduct to the attention of the Student Attorney General and you are specifically prohibited from taking punitive actions for such conduct on your own. The following pages contain sections of the Instrument that deal most directly with instruction. A full-text version of the Instrument may be obtained from the Office of the Dean of Students.

The Honor Code and The Campus Code

The Honor Code and the Campus Code, embodying the ideals of academic honesty, integrity, and responsible citizenship, govern the performance of all academic work and student conduct at the University. Acceptance by a student of enrollment in the University presupposes a commitment to the principles embodied in these codes.

The discovery and dissemination of knowledge through research, teaching, and learning is the fundamental activity of this academic community. Intellectual honesty is integral to that enterprise. Academic dishonesty in any form is unacceptable, because any breach in academic integrity, however small, strikes destructively at the University's life and work.

...

In order to ensure effective functioning of an honor system worthy of respect in this institution, specific responsibilities of students and the faculty have been set forth. These responsibilities are not inclusive: They constitute but the minimum required of members of the faculty and of the student body. Nor are they mutually exclusive. The obligation of a faculty

member or a student to uphold the values of academic integrity in this University shall not be lessened or excused by any failure of the other to comply with his responsibility.

a. Responsibility of Students

1. To conduct all academic work within the letter and spirit of the Honor Code which prohibits the giving or receiving of unauthorized aid in all academic processes.

2. To consult with faculty and other sources to clarify the meaning of plagiarism; to learn the recognized techniques of proper attribution of sources used in the preparation of written work; and to identify allowable resource materials or aids to be used during examination or in completion of any graded work.

3. To sign a pledge on all graded academic work certifying that no unauthorized assistance has been received or given in the completion of the work.

4. To comply with faculty regulations designed to reduce the possibility of cheating—such as removing unauthorized materials or aids from the room and protecting one's own examination paper from the view of others.

5. To maintain the confidentiality of examinations by divulging no information concerning an examination, directly or indirectly, to another student yet to write that same examination.

6. To report any instance in which reasonable grounds exist to believe that a student has given or received unauthorized aid in graded work. Such report should be made to the Office of the Student Attorney General or the Office of Student Affairs.

7. To cooperate with the Office of the Student Attorney General and the defense counsel in the investigation and trial of any incident of alleged violation, including the giving of testimony when called upon. Nothing herein shall be construed to contravene a student's right enumerated in Section V.A.2.b. of the Instrument.

...

b. Responsibility of the Faculty

Academic work is a joint enterprise involving faculty and students. Both have a fundamental investment in the enterprise and both must share responsibility for ensuring its integrity. In relation to the Honor Code, therefore, specific responsibilities of the faculty which parallel the responsibilities of students have been formally adopted by the Faculty Council. These are to be attached to the Instrument as Appendix A. [which responsibilities are included in the following:]

1. To inform students at the beginning of each course and at other appropriate times that the Honor Code, which prohibits giving or receiving unauthorized aid, is in effect. Where appropriate, a clear definition of plagiarism and a reminder of its consequences should be presented, and the extent of permissible collaboration among students in fulfilling academic requirements should be carefully explained.

2. To identify clearly in advance of any examination or other graded work the books, notes or other materials or aids which may be used; to inform students that materials or aids other than those identified cannot be used; and to require unauthorized materials or aids to be taken from the room or otherwise made inaccessible before the work is undertaken.

3. To require each student on all written work to sign a pledge when appropriate that the student has neither given nor received unauthorized aid. Grades or other credit should not be awarded for unpledged work.

4. To take all reasonable steps consistent with existing physical classroom conditions - such as requiring students to sit in alternate seats - to reduce the possibility of cheating on graded work.

5. To exercise caution in the preparation, duplication and security of examinations (including make-up examinations) to ensure that students cannot gain improper advance knowledge of their contents.

6. To avoid, when possible, reuse of instructor-prepared examinations, in whole or in part, unless they are placed on reserve in the Library or otherwise made available to all students.

7. To exercise proper security in the distribution and collection of examination papers; and to be present in the classroom during an examination when the in-

structor believes that his presence is warranted or when circumstances, in his opinion, make his presence necessary.

8. To report to the Office of the Student Attorney General or the Office of Student Affairs any instance in which reasonable grounds exist to believe that a student has given or received unauthorized aid in graded work. When possible, consultation with the student should precede reporting. Private action as a sanction for academic cheating, including the assignment for disciplinary reasons of a failing grade in the course, is inconsistent with faculty policy and shall not be used in lieu of or in addition to a report of the incident.

9. To cooperate with the Office of the Student Attorney General and the defense counsel in the investigation and trial of any incident of alleged violation, including the giving of testimony when called upon.

The Code of Student Conduct
A. It shall be the responsibility of every student at the University of North Carolina to obey and to support the enforcement of the Honor Code, which prohibits lying, cheating, or stealing when these actions involve academic processes or University, student, or academic personnel acting in an official capacity.

B. And it shall be the further responsibility of every student to abide by the Campus Code, namely to conduct oneself so as not to impair significantly the welfare or the educational opportunities of others in the University Community.

D. Individual Offenses
1. Expulsion or suspension, or lesser sanctions, may result from the commission of any of the following offenses:

a. Academic cheating, including (but not limited to) unauthorized copying, collaboration, or use of notes or books on examinations, and plagiarism (defined as the intentional representation of another person's words, thoughts, or ideas as one's own). For academic cheating, suspension is the normal sanction for the initial offense unless the court determines that unusual mitigating circumstances justify a lesser sentence.In those instances probation is the only appropriate lesser sanction. Suspension is the minimum sanction for conviction in second and subsequent offenses of academic cheating.

...
m. Unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature when such conduct

(i) constitutes an express or implied condition to another person's academic pursuits, University employment, or participation in activities sponsored by the University or organizations or groups related to the University, or

(ii) is engaged in for the purpose of interfering with such pursuits, employment or participation, or

(iii) creates an intimidating, hostile, or demeaning environment for such pursuits, employment, or participation.

This subsection does not apply when a student engages in the proscribed conduct while acting in the capacity of University employee or teacher.

n. Verbal or physical behavior that, according to reasonable sensibilities, stigmatizes or victimizes an individual on the basis of race and

(i) constitutes an express or implied condition to another person's academic pursuits, University employment, or participation in activities sponsored by the University or organizations or groups related to the University, or

(ii) is engaged in for the purpose of interfering with such pursuits, employment or participation, or

(iii) creates an intimidating, hostile, or demeaning environment for such pursuits, employment, or participation.

This subsection does not apply when a student engages in the proscribed conduct while acting in the capacity of University employee or teacher.

o. Aiding or abetting in the infraction of any of the provisions of this Section II.D.1.
...
** Individuals filing claims of sexual or racial harassment or processing such claims should follow the procedures described in "Procedures Through Which Students Shall Attempt Resolution of Sexual and Racial Harassment Complaints," which is available in the Office of the Dean of Students.*

Grading System & Final Examinations

Following are the official rules and policies on grading and exams in the *University Registrar's Procedures Memo No. 8.* These policies set a standard to ensure that all students are evaluated in a common way. The rules are meant to provide an administrative guide to help procedures go smoothly for both instructors and students.

While these are the official policies and will work well most of the time, there may be unique situations which will call for flexibility, and instructors may use their own discretion and judgment after consultation with an individual student. Since informal customs and procedures may vary from department to department, consult with the appropriate administrative authority in your department to find out about any informal policies that may be practiced.

Purpose

This publication is intended to bring together the policies and procedures evolved by the University for the administration of final examinations and for the grading system.

1. General Provisions. The Faculty Council has approved various policies and procedures regarding examinations and the grading system. In order that we may have uniform administration of these policies, the procedures below were developed to apply to all schools and departments. This revision reflects the results of the Faculty Council Meeting of March 18, 1983 concerning undergraduate grading. The major changes involve the time limits for removal of temporary grades and the use of a grade of F/AB.

2. Examinations. Regular written examinations are required at the end of each term in all courses numbered below 200. Exceptions on courses numbered below 200, based on special types of work done in the course, must have advance approval of the Provost. For courses numbered 200 and above, final examinations, which may or may not be written, may be given at the option of the instructor.

a. General. A final examination schedule, announced prior to the beginning of the semester, sets the time for each examination; and no examination (except for laboratory sections) may be held at any time other than that specified in the general schedule, which cannot be changed after it has been announced. Examinations may not be held later than 7:00 PM. Papers written in final examinations are not to be carried away from Chapel Hill to be graded. No special preparation quizzes may be given during the last five days of classes in a regular semester, or during the last two days of classes in a summer session. Final examinations for a full course should not exceed a period of three hours.

b. Instructor Grade Reports. The original copy of the Instructor's Grade Report will be returned to the records area of the University Registrar's Office, the second copy is to be retained by the department, the third copy is to be kept by the instructor, and the fourth copy may be posted. Grade Reports are to be in the department office within 72 hours after the scheduled time of the examination. The department chairman is responsible for recording receipt of each report and forwarding it promptly to the University Registrar's Office, 105 Hanes Hall. Complete term reporting requires that grades be turned in on time. If grade rolls are not turned in on time, NR (no report from instructor) is recorded on term reports.

c. Who May Take Regular Final Examinations. The following may take the regular final examination in a course:

(1) Enrolled members of the class whose names have been reported from the University Registrar's Office as having been registered in due form. Confirmation of enrollment can be obtained from the University Registrar's Office in case of doubt.

(2) Those students who have been issued an excuse from their Academic Dean authorizing their absence from the normally scheduled final examinations of the same course, or those students who have obtained a permit from the University Registrar's Office to take a special examination in that course (normally such authorization is based on an Infirmary excuse).

d. Examinations in Absentia. Only in very exceptional cases can arrangements be made to take examinations in absentia. There is a fee of $10.00 for each examination taken in absentia. Applications for examinations in absentia should be directed to the dean of the school in which the student is registered.

e. Student Pledge. Each student is required to

subscribe his name to the following pledge or its equivalent on every paper: "I hereby certify that during this examination I have neither given nor received aid." The instructor will not report a grade for any student whose examination paper lacks this pledge. The instructor will write "no pledge" in the space for the grade on the Instructor's Grade Report. The grade IN (incomplete) will be entered by the University Registrar's Office. If the student later signs the pledge, the instructor may then report his proper grade to the University Registrar's Office on an Official Grade Change Form.

f. The Time of an Examination. The examination schedule at the end of each term having once been fixed cannot be changed, and the examination must be held at the time shown on the schedule. In any case where it appears necessary and desirable to deviate from this rule, the following procedure should be adhered to:

(1) Request of an individual student to take a regularly scheduled examination at any time other than the time set in the schedule.

(a) The student should be required to obtain an Examination Excuse from his academic dean. The student may then take the examination at a later date in accordance with the procedure outlined in the regulations for removal of EX AB.

(b) Or, if there are compelling and extraordinary reasons for taking the examination prior to the time set in the schedule, the student should make application through the dean of the college or school to the Provost whose decision is final. The application must be made not later than three weeks before the scheduled exam. In summer session, applications should be made through the dean of his school or college to the Director of the Summer Session.

(2) Request by an instructor or department to change the time of an examination for an entire class after it has been fixed in the schedule.

(a) The instructor, through his department and school, should make the request to the Provost. Effective July 1, 1985 the request must be made by October 1st for the Fall Semester or March 1st for the Spring Semester. No request will be considered for whatever reason after those dates. If approved, the instructor would assume responsibility for making special arrangements to give the examination to any student who had a schedule conflict as a result of the change.

(b) The change could be made only to one of the other exam periods in the schedule. Such changes will be granted only under the most extenuating circumstances.

3. The Grading System.

a. System of Marking Grades. Grades based upon the following system of marking are the only authorized grades to be used on the Instructor's Grade Report form. Beginning with courses taken in the Spring Semester 1977, pluses and minuses may be assigned to grades of A, B, C, and D. However, pluses may not be assigned to an A and minuses may not be assigned to a D. Commencing in the Fall Semester 1978 pluses and minuses will be weighted in accordance with the table [contained in the section titled "Quality Points"].

Undergraduate
A - Highest level of attainment
B - High level of attainment
C - Adequate level of attainment
D - Minimal passing level of attainment
F - Failed - Unacceptable performance
IN - Work Incomplete
AB - Absent from Final Examination (regardless of reason)
PS - Passing grade for course using Pass-Fail grading
S - Satisfactory Progress (authorized only for first portion of an Honors Program)

Quality Points. The approved grades and associated quality point values per semester hour are as shown below. Fall 1978 and Subsequent.

Grade	*Quality Points*	*Grade*	*Quality Points*
A	*4.0*	*C+*	*2.3*
A-	*3.7*	*C*	*2.0*
B+	*3.3*	*C-*	*1.7*
B	*3.0*	*D+*	*1.3*
B-	*2.7*	*D*	*1.0*
		F	*0.0*

Temporary grades of IN or AB are treated as an F (zero quality points) until removed. Courses with a grade (or notation) of PS, S, BE, NR, W, PL, H, P or L are ignored in establishing the quality point average. The method of computing quality point average is described in the Undergraduate Bulletin.

b. Materials and Forms. There are three forms provided by the University Registrar's Office for the purpose of reporting grades: the Official Class Roll and Grade Report for final grades in a course, Freshman Mid-Term in the Fall Semester only, and the Official Report of Grade Change or Removal of Temporary Grade.

c. Procedure for Reporting Grades by Instructors. The procedure for reporting grades shall be as follows:

(1) Regular Grades. Instructors should report on the Official Class Roll and Grade Report the grades for all students registered in a particular course. Faculty legislation requires that grade reports be submitted to the records office within 72 hours after the examination is given. The following definitions will be used as guides for the assignment of undergraduate grades.

(a) A - Mastery of course content at the highest level of attainment that can reasonably be expected of students at a given stage of development. The A grade states clearly that the student has shown such outstanding promise in the aspect of the discipline under study that he/she may be strongly encouraged to continue.

(b) B - Strong performance demonstrating a high level of attainment for a student at a given stage of development. The B grade states that the student has shown solid promise in the aspect of the discipline under study.

(c) C - A totally acceptable performance demonstrating an adequate level of attainment for a student at a given stage of development. The C grade states that, while not yet showing unusual promise, the student may continue to study in the discipline with reasonable hope of intellectual development.

(d) D - A marginal performance in the required exercises demonstrating a minimal passing level of attainment for a student at a given stage of development. The D grade states that the student has given no evidence of prospective growth in the discipline; and accumulation of D grades should be taken to mean that the student would be well advised not to continue in the academic field.

(e) F - For whatever reason, an unacceptable performance. The F grade indicates that the student's performance in the required exercises has revealed almost no understanding of the course content. A grade of F should warrant an advisor's questioning whether the student may suitably register for further study in the discipline before remedial work is undertaken.

(f) F/AB - Must be given to a student who was absent from the final exam, but was failing before the final, and had no possibility of passing the course.

(2) Temporary Grades. Instructors should report the removal of a temporary grade on a grade change form. Temporary grades of Incomplete (IN) and Absent (AB), unless assigned in error, are reflected on a student's transcript even after conversion to a permanent grade.

(a) Grade IN (Incomplete). Instructors should report on the Instructor's Grade Report an IN for the student who took the final examination but who needs to complete some other work required in the course. An IN translates to an F in computing QPA.

The grade IN may be converted into one of the other grades (A, B, C, D, F, H, P, L, PS, S). For undergraduates, an Incomplete which is not removed within eight weeks after the beginning of the next regularly scheduled semester will be converted to an IN/F. Graduate students are allowed a maximum of one year for completion of the course.*

(b) Grade AB (Absent). Must be given to a student who did not take an exam regardless of the reason, but might have passed the course had they done so. The instructor should not report "dropped" or "withdrawn" and should not give a grade of F. For each undergraduate student who receives an IN or an AB, the instructor should submit a completed "REPORT FOR ASSIGNMENT OF TEMPORARY GRADE OF AB OR IN TO UNDERGRADUATES," the purpose of which is to establish a record of what arrangement has been made between student and instructor to remove the AB.

An unexcused AB may not be removed and carries the force of an F in computing QPA, and for an undergraduate converts to an F at the close of the next regularly scheduled semester after receiving the AB.*

An excused AB may be converted to any approved

grade: A, B, C, D, F, H, P, L, PS, S, or IN. AB is computed as F in QPA until removed, and for undergraduates, converts to AB/F unless the exam is taken by the close of the next regularly scheduled semester after receiving AB. Graduate students are allowed a maximum of one year for completion of the course.*

An ABSENCE may be excused only by the deans or the University Infirmary. An excused AB may be removed in the following manner:

(i) When the official excuse is authorized by the dean, the student will be provided a copy of the "Examination Excuse" to present to the instructor. A second copy of the excuse is on file in the University Registrar's Office. In the event of loss or question, the University Registrar's Office will provide the student a permit to take the final examination.

(ii) When the official excuse is authorized by the University Infirmary, the University Registrar's Office will issue the student an "Official Permit to Take a Final Examination." The infirmary provides the University Registrar's Office a daily list of all students medically excused during the examination period.

(iii) Upon receipt of signed "Examination Excuse" (from a dean's office) or an "Official Permit to Take a Final Examination" (from the University Registrar's Office). The instructor may then arrange a suitable time for the examination.

d. Failure to Hand in Exam Paper. Instructors should report an F for a student present at the examination but who fails to hand in their examination paper. Instructors are requested to note that the student was present but failed to turn in his/her paper.

e. Grade Changes. The grades of H, P, L, A, B, C, D, PS, and F are considered to be permanent grades and once reported on the Instructor's Grade Report may not be changed, except under the following conditions:

(1) Clerical or Arithmetical Error. An Instructor who has reported an incorrect grade for a student because of an error in calculating the grade or in transposing it onto the Grade Report, may change the grade to one of the other letter grades, provided this change is made no later than the last day of exams of the next succeeding regular semester. Such a change must be reported to the University Registrar's Office on an Official Grade Change Form. This report must contain a statement to the effect that the grade change is due to a clerical, arithmetical or transposition error and must contain the written approval of the department chairman concerned and, for Graduate Students, the approval of the Dean of the Graduate School.

(2) Protest Grade for Undergraduate and Post Baccalaureate Professional Students. Any student who protests a course grade shall first attempt to resolve this disagreement with the instructor concerned (An instructor may change a permanent grade only when a clerical or arithmetic error is involved, see paragraph (1) above.) Failing to reach a satisfactory resolution, the student may appeal the grade in accordance with the procedures outlined [in the complete University Registrar's Procedures Memo No. 8]. Such appeal must be made not later than the last day of classes of the next succeeding regular semester. Students should present the appeal in writing to the dean of their school. The dean will refer the appeal to the administrative board of his school and the chairman of the department concerned. Final decision will be made by the administrative board and no change of grade will be made except as a result of decision by the board, the chairman of which will report such decision to change the grade to the University Registrar's Office.

4. Grade Books and Final Examination Papers. It is advisable that each faculty member retain final examination papers on file for at least one year. It is also desirable that a faculty member who leaves the University deposit with his chairman his grade books for at least the last three years.

These recommendations are based on the fact that students frequently attempt to remove the temporary grades of EX AB and IN in courses which they took with instructors who are no longer on the faculty.

University Registrar's Procedures Memo No. 8

Smoking in Class

On November 24, 1975, on the recommendation of student leaders and after a student poll, the Faculty Council passed a resolution: "It is the sense of the Faculty Council that smoking in class should be prohibited." The resolution further called upon faculty members to implement the resolution.

Faculty Handbook

Pass-Fail Grading System

Regulations governing the "Pass-Fail" grading system, under which a student may register for a restricted number and range of courses on a pass-fail basis rather than for a normal letter grade, are found in The Undergraduate Bulletin (under "Grading Systems" in the chapter, "Academic Procedures"). Students taking a course pass-fail are to comply with the regular examination and attendance requirements. Faculty members will set the same requirements and use the same evaluation standards for pass-fail students as for others. Students will be well-advised to avoid the pass-fail option in courses that might prove relevant to plans for future education or career.

Faculty Handbook
1985, as amended

Drop-Add Policy

Undergraduate students are expected to carry a full academic load (fifteen course hours per semester is normal, twelve course hours per semester is the minimum load) in residence except in cases where illness or physical handicap, family emergency, or substantial employment justify a reduction. Such reductions may be authorized only by the dean or his representative in the student's college or school. Instructors should not recommend to students that they attempt to drop a course simply because they are not doing well.

Undergraduate students may drop and add classes without record during the first five regular class days of each term and during the first two days of each summer session with the approval of the appropriate academic advisor. Instructors should specify course goals, content, means, and requirements early in the semester so that the student knows the nature of his commitment.

Any course dropped with official permission and with a passing grade prior to the end of the sixth week of classes (and tenth day of summer session), will be recorded on the student's transcript with the symbol "W" (withdrawal). For a dropped course where the student's standing is below passing, the grade of F is recorded. No course may be dropped after the sixth week of class, except under extraordinary circumstances, and must be approved by the student's academic dean. A student who ceases to attend a class without written official authorization receives an AB in the course, which is computed as a failing grade in the official record.

Faculty Handbook
1985, as amended

Class Attendance

The following regulations on a student's class attendance were adopted by the Faculty Council (1957):

Regular class attendance is a student obligation, and a student is responsible for all the work, including tests and written work, of all class meetings. No right or privilege exists which permits a student to be absent from any given number of class meetings.

Instructors will keep attendance records in all classes. If a student misses three consecutive class meetings, or misses more classes than the instructor deems advisable, the instructor will report the facts to the student's academic dean for appropriate action.

The appearance of a student's name on the Infirmary list constitutes an excuse for the student for absences from classes during the period the student is in the Infirmary. This list is circulated to all deans of colleges and schools having undergraduate students. In case of doubt the instructor may check with the office of the student's dean.

Students who are members of regularly organized and authorized University activities and who may be out of town taking part in some scheduled event are to be excused during the approved period of absence. Notification of such an absence must be sent by the responsible University official to the office of the student's dean where instructors may, should they be in doubt, consult the list.

Faculty Handbook
1985, as amended

General University Policies

Academic Freedom

Trustee Policies and Regulations Governing Academic Tenure in The University of North Carolina at Chapel Hill (June 18, 1976) defines academic freedom:

Academic freedom is the right of a faculty member to be responsibly engaged in efforts to discover, speak and teach the truth. It is the policy of the University to maintain and encourage full freedom, within the law, of inquiry, discourse, teaching, research, and publication and to protect any member of the faculty against influences, from within or without the University, which would restrict the faculty member in the exercise of these freedoms in his or her area of scholarly interest.

The University recognizes that in his or her role as citizen, as to matters outside the area of his or her scholarly interest, the faculty member has the right to enjoy the same freedoms as other citizens, without institutional censorship or discipline, though he or she should avoid abuse of these freedoms. The faculty member should recognize that accuracy, forthrightness and dignity befit his or her association with the University and his or her position as a person of learning. Except when officially authorized, a faculty member should not represent himself or herself as a spokesman for the University.

Faculty Handbook
1985, as amended

Affirmative Action Policy

Equality of Opportunity

The University Code (1975) specifies that "admission to, employment by, and promotion in The University of North Carolina and all of its constituent institutions shall be on the basis of merit, and there shall be no discrimination on the basis of race, color, creed, religion, sex or national origin." The University also does not and will not practice or permit discrimination in employment because of physical or mental handicap in regard to any position for which an applicant or employee is qualified or discrimination in employment on the basis of age as provided in law.

The UNC-Chapel Hill administration has taken special steps to encourage admission application by minority students. The University takes and will take affirmative action in a continuing good faith effort to eliminate any evidence of discrimination in employment on the basis of race, color, religion, sex, national origin, or handicap.

The University has adopted affirmative action plans with programs to assure, effectuate, and maintain compliance with legal requirements applicable to race, color, religion, sex, national origin, handicap, and veteran status. They are reaffirmation of the University's commitment to equality of opportunity for both moral and educational reasons. The plans are a pledge of the University's good faith efforts to provide appropriate educational programs of the highest attainable quality in an academic community dedicated to merit.

Faculty Handbook
1985, as amended

Sexual Harassment

The University's Sexual Harassment Policy defines sexual harassment, describes responsibilities of employees and students, encourages informal resolution of complaints, and specifies administrative review and grievance procedures to resolve matters under the Policy. Resolution of student complaints of harassment by another student, except student employees, are covered by the *Instrument of Student Judicial Governance* available through the Office of the Dean of Students. The full-text version of the University's Sexual Harassment Policy can be found in the "Basic Governance Documents" in the office of each dean and department chair. Section I of the Policy provides:

Policy

A. This Policy and these Procedures apply to University students, agents, and employees, including faculty, EPA non-faculty, Staff, and student employees.

B. Sexual harassment constitutes unlawful discrimination on the basis of sex. Sexual harassment violates both law and University policy, and will not be tolerated in the University community.

C. Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a

sexual nature by one in an official University position or by a fellow University employee constitute sexual harassment when:

1. submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or academic standing, or

2. submission to or rejection of such conduct by an individual is used as the basis for an employment or academic decision affecting that individual, or

3. such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance, or creating an intimidating, hostile, or offensive environment.

In determining whether alleged conduct constitutes sexual harassment, the record as a whole will be considered, as well as the totality of the circumstances, such as the nature of the alleged conduct and the context in which the alleged conduct occurred.

D. It is the responsibility of every employee and student in the University community so to conduct himself or herself as to contribute to an environment free of sexual harassment.

E. This Policy seeks to encourage students and employees to express freely, responsibly, and in an orderly way their opinions and feelings about any problem or complaint of sexual harassment. Any act by a University employee or agent of reprisal, interference, restraint, penalty, discrimination, coercion or harassment - overtly or covertly - against a student or an employee for responsibly using the Policy and its Procedures interferes with free expression and openness. Accordingly, such acts violate this Policy and require appropriate and prompt disciplinary action.

F. This Policy shall not be used to bring frivolous or malicious charges against students, employees, or agents.

G. Information regarding this Policy is available from the Affirmative Action Office, Grievance Committee chairs, the [office of Employee Services, Human Relations], and from the Office of the Dean of Students.

Sexual Harassment Policy and Procedures

Racial Harassment

The University's Racial Harassment Policy and Procedures became effective August 22, 1990. The Policy defines racial harassment, encourages informal resolution of complaints, provides for anonymous evaluation and educational feedback, and specifies administrative review and grievance procedures for formal resolution under the Policy. The full-text version of the Policy can be found in the "Basic Governance Documents" in the office of each dean and department chair. The Policy, in part, provides:

Preamble

Discrimination on the basis of race is unacceptable at The University of North Carolina At Chapel Hill. Such behavior threatens to destroy the environment of tolerance and mutual respect that must prevail if the University it to fulfill its purposes.

The University through this Racial Harassment Policy and Procedures is providing an additional means for the enforcement of its nondiscrimination policy. Enforcement of this Policy shall be consistent with the freedom of speech guaranteed by the First Amendment to the United States Constitution. At the same time, it is hoped that it will deter discriminatory conduct that is not protected by the legally defined boundaries of free speech, in fulfillment of the University's duty to protect its educational environment.

Because there may be conflict among freedom of speech, the right of individuals to be free from injury caused by discrimination, and the University's duty to protect the educational process, the enforcement procedures shall recognize that it may be necessary to have varying standards depending upon the place of the conduct in question. Thus a distinction may be drawn among public forums, educational and academic centers and housing units.

Policy

A. Racial harassment is contrary to the University's Policy of equal opportunity, can constitute unlawful discrimination on the basis of race,, and will not be tolerated in the University community.

B. It is the responsibility of every employee and student in the University community so to strive to create an environment free of racial harassment.

C This Policy and these Procedures apply to University students, agents, and employees, including faculty, EPA non faculty, Staff, and student employees.

D. The definition of what constitutes racial harassment on the part of a student, other than a student employee in the course and scope of his or her employment, is contained in Section 2.D.1.n. of the Instrument of Student Judicial Governance. If a student believes he or she has been the victim of racial harassment by a fellow student, other than a student employee, the student should proceed in accordance with the terms of the Instrument. Information concerning the Instrument and this process is available from the Office of the Dean of Students.

E. Racial harassment is defined for employees, including student employees in the course and scope of their employment, as racially motivated conduct, when engaged in by one in an official University position or by a fellow University employee, that:

1. discriminates on the basis of race (a) in terms, conditions, working environment, or privileges of employment, (b) in enrollment, course assignment, grade, or opportunity for participation in any University benefit, service, or offering, or (c) in University-sponsored extracurricular activities; or

2. is directed towards a specific person or persons and involves (a) the use of force, (b) the threat of the use of force, or (c) the infliction of severe mental or emotional distress through means including the use of racial slurs, epithets, or insults, or any other conduct by one in an official University position or by a fellow employee that discriminates on the basis of race.

In determining whether alleged conduct constitutes racial harassment, the record as a whole will be considered, as well as the totality of the circumstances. This means that the nature of the alleged conduct and the context in which the alleged conduct occurred will be examined and evaluated.

F. Through this Policy students and employees are encouraged to express freely, responsibly, and in an orderly way their opinions and feelings about any problem or complaint of racial harassment. Any act by a University employee or agent of reprisal, interference, restraint, penalty, discrimination, coercion or harassment - overtly or covertly - against a student or an employee for responsibly using the Policy and its Procedures interferes with free expression and openness. Accordingly, such acts violate this Policy and demand appropriate and prompt disciplinary action.

Racial Harassment Policy and Procedures

Alcoholic Beverages

The University's "Policy on Student Possession and Consumption of Alcoholic Beverages in Facilities of The University of North Carolina at Chapel Hill" sets forth the conditions under which alcoholic beverage use consistent with Federal, State and local laws and ordinances is permitted in University facilities and on University property.

North Carolina Statutes and Local Ordinance Pertaining to the Possession, Use, and Consumption of Alcoholic Beverages:

A. Generally, persons who are twenty-one (21) years of age or older may purchase, possess, or consume alcoholic beverages containing less than fourteen percent (14%) of alcohol by volume (been and unfortified wines). (General Statute 18B-300) There are some exceptions to this statement, and individuals are responsible for knowing what those exceptions are.

B. Persons who are twenty-one (21) years of age or older may purchase and possess at their home or temporary residence alcoholic beverages containing more than fourteen percent (14%) of alcohol by volume (fortified wine and spirituous liquors). (General Statute 18B-301)

C. It is unlawful for any person under twenty-one (21) years of age to purchase, possess, or consume any alcoholic beverage; for anyone to sell or give to, or to aid or abet such a person in purchasing, possessing, and consuming any alcoholic beverage. (General Statute 18B-302)

D. Under no circumstances may alcoholic beverages of any kind be sold by any person, organization, or corporation on the campus of the University. (General Statute 18B-1006[a]) Both direct and indirect sales are unlawful.

E. Chapel Hill ordinances provide that it is unlawful to consume any alcoholic beverage in a public place.

In relation to alcohol, as in other matters, all members of the University community are expected to act as adults, to obey the law, to obey University policy, and take personal responsibility for their conduct. Individuals of any age who violate University policy or who threaten disorder, public disturbance, danger to themselves and others, or damage to property will be subject to disciplinary action.

The Undergraduate Bulletin
1988-1990

Policy on Illegal Drugs

Students, faculty members, administrators, and other employees of The University of North Carolina at Chapel Hill are responsible, as citizens, for knowing about and complying with the provisions of North Carolina law that make it a crime to possess, sell, deliver, or manufacture those drugs designated collectively as "controlled substances" in Article 5 of Chapter 90 of the North Carolina General Statutes. Any member of the University community who violated state law is subject both to prosecution and punishment by the civil authorities and to disciplinary proceedings by the University. Also, recent federal legislation requires, as a condition of employment, that any faculty or staff member engaged in the performance of a federal grant or contract must abide by the University's Drug Policy and must notify his or her dean, director, or department chair of any criminal drug statute conviction for a violation occurring in the work place not later than five days after the conviction.

Disciplinary proceedings against a student, faculty member, administrator or other employee will be initiated when the alleged conduct is deemed to affect the University's interests. Penalties will be imposed for violation of the policies of the University only in accordance with procedural safeguards applicable to disciplinary actions against students, faculty members, administrators, and other employees.

Every student, faculty member, administrator, and other employee of the University is responsible for being familiar with and complying with the terms of the Policy on Illegal Drugs adopted by the Board of Trustees. Copies of the full text of that policy are available from your dean, director, or department chair, or from the Office of the Dean of Students or the [office of Employee Services, Human Resources].

The Faculty Handbook
1985, as amended

AIDS

AIDS is a contagious disease now prompting worldwide fear because the number of victims is growing precipitously—and because in its fully developed form AIDS is inevitably fatal. Current medical research and experience have established that the responsible virus is not transmitted or contracted casually. In most cases it is transmitted by sexual intercourse between male homosexuals or bisexuals (70-75 percent of all cases in the United States) and by intravenous drug use (17 percent).

Prevention is the only known weapon effective against AIDS and education is the principal means of controlling AIDS. This University accepts its responsibility for conducting an ongoing educational campaign about AIDS and about preventing AIDS.

A student or employee of the University who becomes infected with the AIDS virus will not be excluded from enrollment or employment, or restricted in access to University services or facilities, unless medically based judgments in individual cases establish that exclusion or restriction is necessary to the welfare of the individual or of other members of the University community.

The Source, The Resources Handbook
Division of Student Services, General College, 1990

General Guidelines

The Advising System

The General College and College of Arts and Sciences each has a staff of advisors who are also full-time faculty members. At the student's request, his or her advisor will review his or her record and prepare a work sheet showing his or her status in his or her degree program. In addition, the advisors are available for consultation on any matter pertaining to the student's academic program. Students in the College of Arts and Sciences who are working toward a four-year baccalaureate degree also have a major department advisor.

Faculty members should note the different areas of responsibility in the latter dual advising system. The department advisor is concerned primarily with the student's major and related work and assisting the student with registration and pre-registration. The college advisor is concerned with the student's entire four-year record and determines whether or not all graduation requirements have been met.

Faculty Handbook
1985, as amended

Students in Academic Difficulty

If students, especially freshmen, are experiencing academic difficulty, the instructor should inform the students' advisor at the General College or their departmental advisor. This should be done as early in the semester as possible so there is adequate time for the student to get help. (You might want to have students write the name of their advisors on the information card they fill out for you at the beginning of the semester). In addition, you will receive a midterm grade report form for all freshmen enrolled in your courses. You should calculate an interim grade for your first-year students and return the form to the General College.

Use of Copyrighted Materials in Teaching

As an instructor, you may want to make use of off-air recordings of television programs, edited films, 35mm slides of pictures in books, anthologies of journal articles, and similar materials in your classes. However, there is a problem with the use of such copyrighted materials for instructional purposes. Notwithstanding the Fair Use clause of the Copyright Act of 1976, whether copies of a work may be used for instruction (and how much of it may be used) is still a matter for the courts to decide. Recent court rulings seem to favor the copyright owners rather than the teachers who use the material. Copy centers have become much more cautious about obtaining permission from copyright owners before duplicating articles for anthologies, so you will need to allow greater lead time if you are accustomed to using such material in your courses. Similarly, you should exercise extreme caution about the use of other kinds of materials such as off-air videotapes. If you have questions about the use or transformation of a specific work, general guidelines for using copyrighted material, or any other copyright concerns, please contact the University's Legal Counsel in the Chancellor's Office.

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