

ORGANIZATION AND CLARITY

Organizing For Yourself

- 1) If a subject is particularly difficult to understand on an abstract level, begin with concrete examples. If, however, the number of concrete details is overwhelming, begin your explanation on an abstract, conceptual level.
- 2) Consider the length and complexity of your lecture topics when scheduling your course.
 - Some faculty feel that 75 minute hour classes allow them to deal with their topics more thoroughly.
- 3) Write down the questions asked by students in your lectures. Incorporate the answers to these questions into your lecture notes for the next time you teach the course.
- 4) Never rely exclusively on last year's notes to present this year's lecture.
 - All professors interviewed constantly update and revise their lectures. One rereads the same source material every year and finds fresh insights each time. Another strives to clarify what he knows is a particularly difficult topic. All professors interviewed search for new and better examples to include in lectures. The revision takes time, but it renews their enthusiasm for the lecture.
- 5) Borrow from your experience as a student and as a listener in planning lecture presentations.
 - One professor remembers how frustrating it was when his professor didn't make it clear why they were going from one step to another. He notes that the few ideas which he has never forgotten "were presented in such a clear way that they almost seemed like common sense." He uses this goal in preparing his own lecture explanations.
- 6) Develop a strategy which helps you organize your thinking on a specific lecture topic.
 - One faculty member writes out his lectures verbatim, not with the intent of reading them, but with the goal of organizing his thoughts. Another professor takes his lecture notes out a week before he's scheduled to cover a given topic and then runs through them once a day. Another instructor, who uses the chalkboard extensively, visualizes how the information he plans to cover will best fit on the boards; this process is his organizing tool.
- 7) Lecture on unfamiliar topics to expand your own knowledge.
- 8) The more secure you are with the course content, the less likely the student is to be intimidated.

- 9) Write an essay about the purpose of the course and include it in the syllabus.
 - One professor spends a whole class period on the topic of "what we are here for" and makes an effort to refer back to the essay periodically during the semester. He feels its important to remind students always of the larger picture.

- 10) Prepare lecture notes and hand them out a few lecture periods ahead of time so that students can see where you are going.
 - One professor notes that this practice introduces the students to the factual content and allows him to move beyond the facts to "how they can be applied to current problems."

- 11) Lecture from only a few notes and specific examples.
 - One professor remarked that this method "gets me to think about the concept each time. If I prepare too much I'm usually too detailed for the students in my lower division classes. I decide on two or three issues that I want to emphasize with pertinent examples."

- 12) List the sequence of what you hope to accomplish in class--"goals for the day," including a list of particular students that you want to make sure to include in discussion that day.

- 13) Have the first assignment include material that should have been learned in prerequisite courses. This will enable you to establish whether or not the students are working from the same base of knowledge that you are assuming that they are.

- 14) Immediately after giving a lecture, write comments on the lecture notes about what didn't work, what didn't seem clear to the students, if you had enough time to cover all of the material, or if you need to include more material. Use the notes as guides for revision the next time you use the lecture.

- 15) Keep folders of pertinent journal and magazine articles and file them according to the course for which they are pertinent.

- 16) Take into consideration the rate at which students assimilate and learn material when planning a syllabus.
 - One professor found that it is easy to over plan a syllabus. He found that all too often important material at the end of the semester is neglected or given a proportionately short amount of time.

- 17) Conduct a seminar for your T.A.s that runs concurrently with the large lecture undergraduate course. The seminar covers the course material and provides an opportunity to talk about the different teaching approaches to the material.

- 18) Use a word processor to record comments about student papers.
- One instructor calls up the same headings for each subsection of her comments, e.g., "content," "style," and "organization." She then types in her specific remarks. These comments can be stored, so that she can better assess student progress when additional papers are turned in.

Organizing For Your Students

- 19) Be sure that things written on the board or overhead projector are complete from a student's point of view.
- One lecturer says he makes a major effort to write down everything clearly with nothing omitted. If it's important enough to write on the board, it's important that it be clear and understandable.
- 20) Share with your students what you know about the active learning process and the same tricks and hints that you use in order to remember things.
- One instructor says, "I make a conscious effort to give students hints about how they can remember things... little observations about equations, to help them see the logic of it."
- 21) Make only a few major points per lecture.
- One professor makes an effort to show students that the details can be understood in a relatively simple framework. He tries to demonstrate that "by remembering a small number of things and rearranging them, you can always find the minute details."
 - Another professor limits himself to a few major points each lecture and begins the class by telling the students, "the three main points of this lecture are..." and he concludes by summarizing those main points.
- 22) When covering difficult topics, use one whole lecture to discuss the main points from beginning to end. In the ensuing lecture(s), fill in the details.
- 23) Summarize your major points at the end of each lecture.
- 24) Explain each concept from a variety of perspectives.
- One professor systematically explains each concept verbally, mathematically, graphically, and by example. He recognizes that, for example, his more analytical students most readily understand the mathematical explanations, while other students seem to need a verbal explanation in order to understand. He is sure then that every student in the class will be able to understand the concepts in a way that coincides with the student's individual learning style. His tests are also based on this variety of perspectives; he includes questions of each type.

- 25) For each topic you cover, use examples that are current and that are relevant to students' interests and everyday life.
- One professor searches all year long for examples from both the popular press and professional journals. When he finds something that relates to everyday life, he clips it and files it. When preparing for lectures, he tries to incorporate the new examples into the presentation. Some examples of good examples are:
 - a) The refractory period of a nerve can best be compared to the time period immediately after flushing a toilet, when it can't be refushed.
 - b) Economics concepts can be illustrated by examples from the popular press or from a typical student's expenditure record.
 - c) In Astronomy, looking at a star's brightness can be compared to looking at an automobile's headlights.
- 26) Prepare a handout with the general lecture outlined on it, especially for difficult concepts.
- One professor hands out an outline with about 3-4 main concepts on it. The students can then fill in the details directly on the handout. (He does this with particularly thorny topics).
- 27) Write the outline of each lecture on the chalkboard or overhead transparency before class.
- One professor writes the outline on the board when the lectures are packed with information. "The outline is a way for the students to organize their notes. I don't want them to copy down everything I say. I want them to listen. I want them to get the major points.
 - Another professor lists on the blackboard the IDs--people, places and things that the students must know in order to make sense of the material.
- 28) Write each new concept on the overhead projector or chalkboard as you introduce it.
- 29) Use railroad chalk, i.e. large size, when writing on the chalkboard. (Available at the UMC bookstore.)
- 30) Prepare overheads in advance, especially if your hand writing isn't clear or if your spelling is poor.
- 31) Work out practice examples of difficult problems on the chalkboard. You can also elicit student input in the problem-solving process.
- 32) Do demonstrations to illustrate principles, but keep them simple and leave time to explain them.

- 33) Try team teaching in order to show students that there is more than one view of the subject.
- One professor notes that when students get two quite contrasting views on successive days, they have to make their own decisions. "To me," he says, "that's a whole lot like real life where there isn't any right answer."
- 34) Start a class with a short question and answer session in order to clarify, review and lay the groundwork for new material.
- 35) Help students with a text that is full of new terms by giving them a summary sheet on the reading that includes the terms that you consider important and questions about the material that the students should consider.
- 36) If you consider an overhead or slide important, give the students a handout of it.
- 37) If you consider certain material important, tell the students "this is important."
- One professor suggests that students go to their text and count the number of pages devoted to a particular topic. He tells them that a ten page topic is usually more important than a two page topic and that the same rule applies to lectures.
- 38) Take the students to the library and have the librarian show them the basic reference tools for your particular discipline.
- One professor has the students practice their library skills after their visit. They are required to choose a topic, find relevant material and construct a bibliography. He has found that "many students are completely intimidated by the library and they appreciate your holding their hand through it for the first time."
- 39) During the first lecture, explain the main goals for the course and how they fit in with the discipline and the entire curriculum. Ask the students to articulate how they see the course as important.
- 40) Model the conceptual thinking process that you expect the students to do.
- One professor spends the first few lectures presenting the theory for the course. "Every subsequent lecture is not self-contained, but fits into the general framework. During the course of the semester I will always return to the framework, often questioning rhetorically about how things fit together."
 - Another professor expects the students to have a "critical engagement with the text." She models the reading process in class by going through a paragraph, showing the students what to do with the text.
- 41) Require students to present their ideas in writing.
- One faculty member assigns weekly "reaction papers," an opportunity for students write a reaction to the works that they are reading. She has found that

the students "acquire confidence in their own voice by being encouraged to write their reactions to what they are reading. I use the reaction papers as a prelude to an analytical paper."

- Another professor requires students to write a scholarly paper and then use the most interesting part of the paper for an informal class presentation.

42) Use a variety of materials.

- Many faculty mentioned the importance of different materials in generating student interest and exploring a topic.

Helping Students Synthesize and Explore

43) Set high standards for the students, but provide them with the tools and guidance to reach those standards.

- Two professors, who have a reputation of being "hard," noted that they expect their students to read and know a great deal of information. At the same time, they are careful to provide students with a structure or conceptual outline which can help students organize that information, and tricks or hints for remembering the information.

44) When presenting a new topic, link it to the material you've already covered, and suggest how it will lead to what you'll cover in the future.

- One professor points out these connections for each topic covered, and reminds his students that making connections in this manner is what she'll test them on.

45) At the start of a lecture, summarize the previous lecture.

- One professor says it only takes him about three to five minutes to do this, and that the time is well spent. He finds there are fewer puzzled looks, and fewer students interrupting the lecture with questions. Another professor writes three or four main concepts from the previous lecture on the board before he begins. Sometimes he discusses them briefly, or invites questions about them. Often he just leaves the concepts there on view.

46) Two to four times a semester, give students the assignment of summarizing the most important concepts in the course up to that point.

- Several weeks before the midterm, one professor asks his students to write a list of the most important general equations from the first half of the course, to identify all the terms in the equations, and to provide a physical example of each term. He notes that reading their answers gives him a good idea of what concepts aren't clear to the students. The next class session, he gives the class his list of the most important equations, and explains his choices. He finds that the process helps students "chunk" facts into larger conceptual units.

- 47) Use the same basic outline for presenting each new concept or topic.
- Students can grasp the organizing principles of the course more easily if the material is presented in a systematic format. For every system studied in physiology, for example, one professor first describes the organs involved, then how they function, then how they're regulated, etc. In economics, one professor explains each concept first verbally, then mathematically, then graphically, and finally by example.
- 48) During class, ask synthesis-level questions of students.
- Asking students synthesis-level questions discourages memorization. In physiology, for example, asking students "How does a malfunction in this system affect the systems we've already studied?" forces them to integrate new information with what they've already learned.
- 49) At the end of the semester, sum up the entire course.
- In physiology, for example, one professor shows a film of human autopsy.
- 50) As students are entering, spend five minutes before class discussing a recent article in the field.
- 51) Tell students about current journals and books related to the course.
- At the beginning of the semester, one professor hands out subscription sheets to a variety of pertinent publications and suggests that the students subscribe to at least one.
- 52) Present the different points of view for a particular issue.
- Systematically critique each point of view to indicate alternative perspectives.
 - Invite a colleague to class who has a different opinion on an issue and argue the issue in front of the class.
- 53) If a question comes up in class that you don't have the latest information on, ask a student to look up the information and report back to the class. Give suggestions to the student about where he could find the answer.
- 54) Give students the opportunity to use the information that they are learning.
- One professor structures the course with the first half covering basic information and with the second half of the semester spent on students' projects, where they apply their knowledge and demonstrate their understanding.
- 55) Use a variety of texts for a course.

- One faculty member mentioned that if another text besides the required one does a better job with a particular point, he xeroxes the information as a handout or puts the book on reserve.
 - Another professor gives students a number of textbooks from which to choose. The students must choose two of the texts to use as references. He has found that "it gives the students slightly different perspectives and phraseology on the same subject matter and I teach the subject, not the textbook."
- 56) Send students on a self-directed field trip.
- One professor remarked that "most field trips are lectures on a bus. The self-directed field trip gives students the opportunity to discover information about their community and points out the fact that learning can and should take place outside of the classroom."