Preparation for College-level Tests

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Student Guide #1

Can you remember much of what happened to you before the age of three or so? Probably not. The reason we can’t remember what went on during our first few years is that we had not yet developed an organized system (namely language) to store information. For instance, although we may have experienced “ball” thousands of times prior to age three or so, we could not remember the concept of “ball” until we had a label, “ball,” to store the information. After we learned the word “ball,” then we could permanently store images we subsequently experienced under that label. We cannot recall unstored information and we cannot store information without labels. This is the secret to good exam preparation. The most important aspect of exam preparation is good organization. In short, we need to develop an organized system of labels so that recall will be easy and accurate. This handout will tell you how to do that.

There are basically two ways to study. One way we might call the linear method and the other we might call the outline method. Unfortunately, most of us were taught the linear method. Under the linear method, we were taught to memorize (yuck!) separate pieces of information beginning on the first line of the first page of the first chapter and proceeding to the last line of the last page of the last chapter. Not only is this linear method of studying extremely tedious and boring, it is also inefficient. This is the kind of studying that produces a “here today, gone tomorrow” short-term memory with little or no understanding.

In this handout, I want to provide you with an alternative way of studying that emphasize organization rather than rote memorization. I will call it the outline method. The outline method is a way of organizing material into main points and subpoints. Using the headings of the outline as labels, we can store specific pieces of information within the outline. Using this method we can create a “mental map” of the material. When a question comes up on a test, we can then locate the answer within our mental map. Even if we are not sure about a specific piece of information, we can at least visualize where in the map that piece of information should fit. Knowing its location gives us a much better chance of getting the right answer (for instance, knowing location can help eliminate obviously wrong options in a multiple-choice question).

Using the outline method, we can answer both descriptive questions (questions about scientific pieces of information) and analytical questions (questions about how specific pieces of information fit together). The outline is the glue that holds the more specific pieces if information together. Knowing how separates pieces of information fit together into an integrated whole is especially important for answering essay questions (see Student Guide #2). By contrast, the linear method is long on description but weak on analysis. This is an important distinction since most college level work is aimed at the analytical rather than the descriptive level.

We can construct our “metal map” or outline in the following way:

1. Take notes on what you read. You should only have to read your assigned material one time from beginning to end. Most books and articles contain two types of information: main points(s) and illustrative evidence. When you read the material the first time, you should isolate the main point(s). Glancing at the introduction, the conclusion, the chapter headings, and subheadings before you begin reading will help alert you to these main points. When you read through the material, you should examine the evidence in the light of the main points. Highlight or notate as you go along. At the end of the session, take a few minutes to jot down a brief outline of main points and critical pieces of evidence as subpoints. These few minutes will give you a
2. **Take notes on your notes.** Most people take too many notes. If you try to get down everything the instructor says, then you will probably miss the main point. Lectures, like readings, are usually organized around main points and illustrated evidence (i.e., data, examples). Your notes should reflect that organization. If you get down all the evidence but don’t know what the evidence illustrates, then you have missed the main point. This is called “losing the forest for the trees.” Use the main point(s) as the skeleton of your outline and add details as required.

   Try to coordinate your lecture notes with your notes on the readings. Instructors usually will either (a) review the readings in class, or (b) spin off on a topic or issue related to the readings. It is usually easier to organize your outlines by topics and then include material from the readings and lectures under each topic. If you study all of the readings first, and then study all of the lectures (or vice versa), then you might get confused about where one begins and the other leaves off.

3. **Compartmentalize your studying time.** You should divide the amount of material you need to cover by the amount of time you have available to study. For instance, if you have a test coming up in four days that covers eight chapters, then you should study one chapter each day. This way you can concentrate on just one chapter at a time without trying to “learn” everything at once. Cramming the night before a test is not only a very inefficient way to study but you should also know that sleep deprivation drastically reduces your ability to think. Remember that sleep deprivation is a brainwashing technique used to intentionally confuse and disorient, which is not the frame of mind you want to be in to take a test.

4. **Final preparation.** This is the best part. Assuming that you have read all of the material and gone to class, your main job at this point is to organize the material into a mental map. Instead of frantically looking at say four thick chapters from the text and two filled note books on the lectures the night before the exam, you will be looking at maybe 10-15 pages of notes in outline form. If you feel you do not have enough detail or that you are vague about something, then you can always go back to the original materials for elaboration or clarification. **But you should never have to re-read anything from beginning to end.** By now you should be reading selectively.

   So far you haven’t yet memorized anything but you have been over the material at least three times—reading it, outline it, and reviewing the outlines. You have become familiar with the material. You may still have to memorize select parts of your outline (or other details) but the task will be much easier because of your familiarity with the material. **Organization is studying without memorization.** By organizing (i.e., outlining), you make decisions and judgments about the material (i.e., you think about it) instead of mindless memorizing it.

   By organizing the material you have exercised command over it. It is a lot easier to review a three-page outline of a book, for instance, than to re-read the entire book. By using your outline you will have formed some central ideas about the book whereas by merely reading the book two or three times you might not. In fact, if you have accurately summarized the main points, then an instructor cannot ask you a central question about the book that would totally stump you. The amazing thing is that you will also remember far more information than you initially outlined. By knowing where everything fits you can remember, by association, a great deal of what you originally read.

   This outline study method will work for any course. But the more the amount of material that is covered and the more material is abstract, the more planning and organizing is required. With practice you can get to be very proficient with this method. Your level of retention and genuine understanding of the material should increase dramatically. Although the
Outline method requires some foresight and planning, it is actually much less time-consuming and far more effective than rote memorization. Why not give it a try?

Outline Example

If I were to outline this handout, I would do so as follows:

Introduction
- Need for an organized system of labels to store and recall information

Two Ways to Study
1. Linear - Memorize from beginning to end
2. Outline - Summarize into main points and subpoints

Two Types of Test Questions
1. Descriptive - Specific pieces of information
2. Analytical - How information fits together
   - Outline method better for both descriptive and analytical questions (especially essay)

How to Construct Outlines
1. Take Notes on Readings
   - Scope out reading in advance
   - Read with a purpose
   - Jot down brief outline
2. Take Notes on Lectures
   - Same as above
   - Try to coordinate readings and lectures
3. Compartmentalize Your Studying Time
   - Divide amount of material by time available
   - Don’t cram
4. Final Preparations
   - Review outlines
   - Check for clarification or elaboration
   - Memorize details