Study guide for biology majors:

Since many of you may not have been students very recently, or (alas) may have developed some poor study habits along the way, please read the following Study Guide to help you get the most from biology courses. (Remember that the same basic points apply to almost any course). Some topics may seem obvious to you, but they have been included because we find that many students do not recognize their importance.

**Extremely Obvious Points**

1. Go to class! When you attend a lecture you receive double benefit: you hear the lecture, and you can write your own notes to remind you about the material covered.
2. Lab attendance is an important requirement. Not only is the work intended to enhance your understanding of biology and the processes of science, but the lab also provides opportunities to get to know an instructor well. This second feature should make it easier for you to find writers of letters of recommendation when you need them later on. Read your lab exercise before going to class.
3. Read any materials handed out in class -- lecture diagrams, reading assignments, study questions, information about how the course will be graded. These are presented to inform you about things you should know.

**Taking Notes**

4. Use a separate notebook or notebook section for each course you are taking. Do not jumble notes from all your courses together. It is a good idea to date the first page of each day's notes for ready reference later.
5. Expect note-taking to be hard work! Try to make a complete outline of the material covered, using your own symbols and abbreviations as necessary; you do not need every word. Leave spaces for subsequent additions (from text, for example). You can always compare notes with classmates if you feel you are missing too much. (If the entire class is missing too much, ask the professor to slow down!) Some students find tape-recordings useful, so that they can fill in or clarify their class notes. There is no substitute for notes.
6. If class notes for your course are put on reserve in the library, do not stop taking your own notes which are designed by you for you. "Reserve" notes are intended to supplement your own, or to fill in on those rare occasions when you cannot attend a lecture.

**Study Habits**

7. Study Time: It is very important to set aside some definite time periods as study time (and only study time) as well as making good use of scraps of time throughout the week. Perhaps you can set aside certain evenings, or it may be useful to "hole up" in the library for a few specific hours each week. You should be able to do this regardless of your work schedule. If you find that you cannot, then your academic career will probably suffer. Allow at least 2 hours for each hour of lecture, and 2-3 study hours for each 3 hours of laboratory.
8. Consistent Studying: Reading the relevant text pages before the class provides an important context. Go over your class notes and other materials on a regular basis (see #7 above), rather than letting things pile up until an exam threatens. Ideally, you should go over class notes within a day or two of writing them, so that you will know what questions to ask, what text material to read more carefully, etc.

9. Communal Studying: Many students find it useful to study with classmates. If you really study, and don’t just talk, it is a good way to compare notes, ask each other quiz questions, etc. It also helps you to know some of your classmates better. Travel time can be used for studying also.

10. Study Questions: If you have study questions before exams, use them. They are intended to remind you about what you should know. Try answering some of the questions as if they were exam questions before you review. Then you will know what areas require your special attention when studying. (Many biology course examinations at UMass Boston rely heavily upon essay questions, the above suggestion gives you practice in organizing essay answers!)

11. Active Studying: If you find yourself "day-dreaming" during study time, do some "active" studying. For example, copy portions of your notes into well-organized units; draw diagrams or graphs that may aid in your understanding of the topic, write out your own definitions of key terms and later match them with those in the text’s Glossary, etc. In other words, do something that forces you to keep your mind on your studies rather than what you will have for dinner, or the person across the table.

Exam Preparation

12. Do not spend large amounts of time reading your text just before an exam. You should have been keeping up as you went along. Your lecture notes are an outline of all that has gone on before, and in most courses these are a good focus for pre-exam reviews. Another useful approach is to glance at illustrations in your text and then write your own figure legends.

13. Try to relax before an exam. No one exam score is going to ruin your life. Some students become so worried about the exam not going well that they do not do as well as they otherwise would. Do not pull "all-nighters!" Get some sleep the night before, and don’t forget to eat!

Taking Exams

14. Although we encourage a group approach to study and prepare for exams, your performance on the exam itself must reflect your knowledge only! Any assistance that you may give to, or receive from a fellow student during an exam is a form of cheating. If detected, you can expect to fail the course or even face expulsion from the university.

15. Look over the whole exam first, to decide how to apportion your time. Try to apportion it to correspond to the "point value" of the question. Do not spend too much time on the first questions of the exam. Read each question carefully and do as it asks. Be sure that what you are writing relates to the question. A lot of vague, general material will not get you many points.

16. If you are unsure about the meaning of a question, ask. Don’t waste valuable time wondering what you are supposed to do. Do not panic if you cannot answer a question immediately; go on to another question and answer it instead.
17. If you are running out of time on a "big essay", outline the rest of your answer, so that the professor can know what your intentions were. This is much more useful than scrawling "out of time" on the page.

18. If your professor will allow you to drop your lowest hour exam score, you should not use this leeway to avoid taking an exam. It is to your advantage to prepare for and take all the exams offered in a course.

**Lab reports**

19. Many of the lab manuals, including those for Biology 111, 210 and 252, give information about how a lab report should be written. Read that information and use it as the basis for your reports. If after reading it, you still do not understand what is required, ask some questions before doing your first report. Do not avoid turning in a report because you are not sure what to do. Ask your instructor for help. Pass your reports in on time. Do not let them accumulate until you are overwhelmed with work.

**Problems**

20. If there are major points you do not understand, ask about them before the eve of the exam. Your professor or your lab instructor is more than willing to help you, particularly if you recognize that their time is taken up by many other academic tasks in addition to teaching. Do not expect to drop in and have a professor drop everything. Rather, go during office hours if possible, or make an appointment after class. Also, be sure to have read the relevant text material and to make a real attempt to understand it before seeking help. (There may be additional books on Reserve).

21. If you feel that an exam question has been graded incorrectly, heed the following:
   a. Check the exam key (or your notes and text, if no key is posted) before talking to your professor.
   b. Never question a grade in anger. It is to your advantage to state your case calmly; most people (students, too) do not react favorably to confrontation.

22. If you find yourself frequently struggling with the material (that does not mean almost failing) you may want to seek free tutorial help from Academic Advising Center (Campus Center).