

STUDYING

Why do homework? If you think you must have your instructor **take up homework every class** in order to be motivated to do it, then you are in the **wrong class! I do not take up general homework assignments! (See Course Policy Agreement)** If you want to **pass** this course, you must master the skills necessary to work the problems on the tests. To master these skills, you must be able to work the homework problems. You will get the most benefit from the homework if you do it or **at least** a fair sampling of problems, **before** the next class period so that you can clear up any difficulties that you are having. This means that rather than just working straight through an assignment, you might just choose a **few** problems of **different** types or difficulties to do before the next class. This way, if your time is limited, you will get a better idea as to whether you have grasped the concept, but just need practice; or whether you are totally lost and need further explanation for certain types of problems.

Do not make the mistake that some have: Terms may sound familiar from high school or a previous course, but do not jump to the conclusion that you are a master of the skills involved. If you expect to do well in this course, **regular study is a must**. You must keep up with the homework assignments as they are given. Unless you are a genius or already know the material in this course now, it is not possible to study only immediately before the test and do well. When assignments are given, make sure that you have tried your best to do the problems **before** the next class period. You may find it difficult to read math books, but remember that there are many useful examples that can be referred to. There will also be **Notes** with some examples available on my webpage. If you get stuck on one problem, try another. For example, don't conclude that if you can't do #1, then you can't do #21. Each assignment may contain different concepts, so some problems may be easier to grasp than others. By trying to do at least a good sampling of the problems before the next class, you will be able to ask specific questions which can be answered without wasting time that could be spent on other topics. Generally, I will begin each class by asking for questions over the homework. **DO NOT HESITATE TO ASK QUESTIONS!** If nobody asks questions, I **assume** that EVERYONE UNDERSTANDS and I will charge on to new material. Although we will sometimes come back to previous assignments, I will usually only ask for questions over an assignment the next class day.

In learning the material, you must understand the various procedures and ideas required to work the problems. Merely memorizing how to work the problems will probably result in confusion and poor success in this course. When new material is covered, **do not hesitate to ask questions** in class. In this way you can clarify the concepts and procedures involved **before** you attempt to do the problems on your own. Sometimes when new material is presented, you initially may only be able to work the problems simply by following the procedure demonstrated in class. But to do well, you need to understand **why** the procedure works. **It may be necessary to work the same problems more than once**, especially if the problem was missed on the first try. Repetition is one of the best tools that you have toward learning new material, so several days after an assignment has been completed, pick a few of the problems and rework them (from scratch). If you are still having trouble, then repeat this procedure until they are fully understood. One student that followed this procedure went from having to drop the course because of failing grades to making a B. She did this by working **every** homework assignment **3** times.

You should figure an **average** of 2 to 3 hours outside of class for every hour in class. The person that gets it quickly will spend less, so if you have trouble with math, you may have to spend more if you expect to do well in this course.

PREPARING FOR TESTS: Remember that you will be given all the types of problems covered. They may not be in the same order as covered in class. You may find it **helpful** to make up a **sampling** of the different types of problems **as** you are doing the individual assignments. If you do this on index cards with problem instructions and problem on the front, and the answer written on the back, then you can "mix them up" and work the problems as if it were a test. This means working the problems without notes, or your tutor or friend there to coach you along, or getting the wrong answer and reworking until you finally get it right. This will give you a fair idea as to how prepared you are for the test. If you have a study buddy, make up tests for each other in a similar way.

When we have a time for **test review**, this is a time for YOU TO ASK QUESTIONS, **NOT** FOR ME TO TRY TO RE-LECTURE OVER SEVERAL WEEKS OF WORK!!!! Therefore, COME PREPARED TO ASK!

CLASS TIME

Take full advantage of the time that you have in class. **STAY AWAKE! TAKE NOTES. ASK QUESTIONS.** As I tell most classes the first day: "I am like a freight train. If there is no stop signal, I am going to lecture at my speed. If you don't understand and you don't ask questions, that is your fault, NOT MINE!" I rarely mind slowing down, but I won't if I don't know that you are lost.

When problems are given to try in class, try your best to work them. Whatever you can figure out correctly on your own will stick with you better than just following me through each step.

DON'T BE AFRAID TO MAKE MISTAKES IN CLASS! This includes questions and answers. There are no "dumb questions or answers" in class. That is the way to learn why certain things that you *want* to do just are not correct.

The idea is to have class work and homework not only teach you the correct things to do, but also teach you the things you should **not** do!

Make a special note of things that I point out as common but serious errors. Try your best to avoid these. When a test is returned to you, make it a learning experience. In particular, if there is a “NO!” or VSE (Very Serious Error) note by a step in a problem, figure out what the error was so that you hopefully won’t repeat it in the future.

FREE TUTORING

There will be instructors like myself, math graduate teaching assistants, and qualified undergraduates here in Ayers in the Math Tutoring Center, Room 101A, available at various times during the day, Monday through Friday, to help you. The schedule for this will be made available soon. This is FREE TUTORING by highly qualified people! If you stump one of our student tutors, there is usually an instructor available to clarify things. You can “Drop in” any time that it is open.... No appointments are necessary; but if we have a lot of students to help, you will have to be patient. You are asked to sign in so that the administration has a record of usage. Because of our demonstrating the desire of students to use this service, we have been able to expand the number of hours that we are available and the number of tutors available. It will also be good for you to print out the **Tutoring Record** and have it signed each time you go. By turning this in with each test, I will be able to know how much you participated, and give you your bonus points. Remember, this can help if you are in a borderline grade situation.

WORKSHEETS

All worksheets are accompanied by an answer page with answers for ALL problems. Some worksheets are of a review nature; some will **replace** the book’s exercises. If a worksheet is assigned, I expect you to **be able to work any type of problem that is represented**; however, do **not** let the number of problems overwhelm you. Look over the worksheet and try a **sampling** of problems, particularly any which look difficult or unusual to you. As stated above, the more you practice, the better you will become at working the problems, so I have made a lot of problems available. However, since I do not require you to turn in these regular assignments, it will be up to you to decide how many problems **you** need to work in order to master the skills involved. Some of the material, I cover in a **different way** from the book, and in these cases, the worksheets are **absolutely essential** for the homework assignment. I will indicate when this is true. I have done this in an attempt to present certain material in an easier way.

SKILLS TESTS

I will be making **Skill Tests** available for MS 112 again this semester. This will be an entirely **voluntary** activity to be done **outside class**. There is a list of 21 Skill Test Topics and where the corresponding problem types can be found. This List will be available on my webpage under **COURSE INFO**, but you must come to MY office or **my** session of the Tutoring Center in order to **take** the tests. I recommend that you print out a copy of this if you are going to participate, so that you can keep up with your performance and know which skill you are ready to take when you come in. This way we can make the best use of our time.

The Test over each Skill Area will be relatively short and will be given **little or no partial credit per problem**. Each Skill is worth **10 Points**. The Skill Tests CANNOT hurt your grade! **Grading options are: #1.** If you accumulate enough points (from 20 Skill Tests), you may use this grade (figured as a percent of 200 possible points) to replace your lowest Major Test score. (For Example: You have 85% on 20 Skill Tests, and you have a low test score of 45, the 85 will replace the 45. I have had this happen!) **#2.** If you have 10 Skill Test Grades, I can replace ½ a Test grade by cutting your total number of points in half. (For example, 90 points earned on 10 tests would be 90%, which is equivalent to 45 points out of 50 points to replace ½ a Major Test grade.) In this case, I can count your BEST 10 scores, if you take more than 10. **Each Skill may be taken only one time.** In the past, students that took these tests benefited, even if it did not appear to help their grade in points, because they were able to get extra feedback and correction in problem areas. These can be used before the Major Test to let you know how well you really are learning the needed Skills so that you know where to keep studying. Alternately, they can be used afterward to demonstrate that you have finally mastered the Skill. The repetition of working on the Skill will help you to retain the knowledge for the Final Exam and for any future courses you will need to take. With the change of syllabus this semester, I will have to revise the topics from previous semesters.

If you struggle with math and can arrange the time to do Skills Tests, you should see good results. Do not put off beginning the tests. If you are one of my previous MS 100 students and took Skills Tests then, realize that these problems are longer, so the time for each skill test is generally longer than the ones for MS 100.

If you are going to participate in these Skills Tests, you MUST BEGIN TAKING THEM BY MIDTERM (THURSDAY, Oct. 25). ALL TESTS MUST BE COMPLETED BY THURSDAY Nov. 29. You may begin taking them as soon as you can arrange a suitable time with me and think you have mastered the skill over which you want to be tested.