How to Study For This Course?

Below are some tips that will increase your chances for passing this course and other mathematics classes in general.

***Have a Positive Attitude toward Mathematics:** Begin with a positive attitude and a belief that you can be successful, given that you are willing to invest sufficient time in learning mathematics.

*** Set High Standards:** You should always do the best you can and strive for the best grade that you can possibly get. Try for a perfect score rather than just passing the course.

***Do Not Dwell on the way you learned mathematics in high school:** College mathematics learning focuses on your detailed work rather than getting the answer only. In high school, learning was geared toward passing your test only. In college, you need to show all work and demonstrate not only your procedural knowledge but your conceptual knowledge as well.

*** Attend Class Regularly:** If you do not go to class you will miss important material that will be used in later sections and /or important announcements. If you do miss a class, make sure to copy the notes before the next class meeting. This is inherent in the spiraling nature of mathematics learning.

*** Share Names, Phone Numbers, or Email Addresses** with at least one student in class. Contact this student if you miss a class, an assignment, or to discuss homework problems that you may find difficult. Attempt to work cooperatively but actively engage in solving problems rather than copy them from your study partner.

*** Be In Class on Time:** Usually important announcements are given during the first few minutes of class. Being delinquent is not a proper way to keep up with your work and be in class. Although you may come a few minutes late, this delinquency causes distraction to those students who were on time. Please be considerate.

*** Watch, and Listen during Class:** This is very important because sometimes important ideas are not written down on the board, but orally presented by the instructor. Taking notes while the instructor is working on the board may not positively contribute to your understanding because learning mathematics requires **seeing and hearing, at the same time**, what is being taught by the instructor. In a course other than mathematics such as English, for example, may require that you listen only but not seeing the professor;

mathematics learning is not so. The instructor will give you enough time to copy after the problem is done on the board.

* **Take Good Notes:** Try to write the problem solution that the instructor writes down on the board. A good set of notes will help you do your homework problems. Please remember that class notes are considered a supplement to the text book and a different method may be used by the professor that is deemed easier than that method used in the book.

*** Make a set of index cards:** Write down important concepts and formulas on index cards. Carry these around with you to look over when you have a few spare minutes. This will help you remember the important concepts or formulas. Remember that formulas are tools that you need to use in problem solving. Therefore, the set of index cards is your "toolbox," using the language of mechanics or carpenters.

*** Ask Questions:** Do not be afraid to ask questions in class. You are not the only students with questions. Probably you are not the only one who does not understand.

*** Do your Homework:** Homework plays a key role in learning mathematics. Do not be a procrastinator, do the homework as soon as the class is over. This will allow you to understand the concepts covered that day. If you wait until the last minute, this will result in an incomplete assignment or an incomplete understanding of the concept. Your homework is your practice. They key is: practice, practice, and practice.

*** Do Homework without referring to your book or notes.** When you are set to start your homework, review your class notes first. Doing so will help you recognize certain points that the instructor focused on in the class and start implement those points. Remember that you are going to encounter some stumbling situations; this is the challenge that you need to face. This is not a reason to lose interest, but an opportunity to study harder and do not hesitate to call your study mates or ask your instructor. It is about **work hard** and **study smart**.

*** Practice, Practice, Practice:** Do as many homework problems as you can. The more problems that you work out, the better prepared you will be for exams. If a certain type of problem presents some difficulty, you should try more problems of that type until you understand the concept. Remember that one of the mathematics heuristics spelled out by George Polya, the Master Problem Solver is to **look for a problem that is similar but**

easier. This way you will have and opportunity to develop a different outlook at the problem you are trying to solve. This methodology helps you trivialize the problem under consideration and develop better understanding.

*** Check Your Work:** Go over the steps you made while working out a problem. Check your answers with the answers in the back of the book. If you have made a mistake, try to correct it. If you cannot figure out what went wrong, ask your instructor, a tutor , or consult a classmate. Always ask yourself whether the answer makes sense or not. For example, if you are solving "distance problem," it makes no sense to get a negative answer, since distance must be positive.

*** Learn from Your Mistakes:** As a learner, each student needs to use the difficulty encountered as an opportunity to check himself/herself whether the material is being mastered. Remember that an error becomes a mistake when you refuse to correct it. Therefore, making mistakes is expected but not learning from those mistakes is unexpected. Mistakes are usually made when we are trying to learn a new material; students who do not make mistakes are not even trying to learn. Learners need to understand that there are common mistakes made in mathematics and students tend to make those mistakes over and over again. However, by tackling those mistakes seriously and without intimidation, the probability of having those mistakes occurred will be significantly reduced.

*** Seek help if You Need it:** Visit your instructor during office hours, take advantage of the tutoring services offered on campus, or form a study group with your classmates.