

How to Succeed in Mr. Mayo's Honors Precalculus Class (With thanks to Dr. Dan Kennedy)

My main goal in teaching Precalculus is helping you be successful. I want each and every one of you to succeed and my assumption is that you would not be in this class if you did not want to succeed. The main question will be how *committed* to success will you be. Not only should students enrolled in this course be capable of operating at the honors level but they must also be willing to operate at the honors level.

One measure of success, unfortunately, will be your grade. As Paul Dressel stated in 1957, "... a grade (is) ... an inadequate report of an inaccurate judgement by a biased and variable judge of the extent to which a student has attained an undefined level of mastery of an unknown proportion of an indefinite amount of material." That having been said, I still need to prepare you for further studies in mathematics whether that is in Calculus or other upper level courses. Because of this fact, and other necessities such as you needing a GPA, etc., I will be grading your performance this year. As Dr. Dan Kennedy says, "A grade is an inadequate way to measure achievement, but a fairly realistic way to measure performance." In everything we do in life our performance is assessed. Teachers just take it a step further and assign a grade to performance.

Your grade in this class will be generally based upon quizzes, tests, a portfolio and a final examination. However, many other things will be necessary for you to be successful. These include your class work, homework, and study.

Class work

You must keep a **notebook** which must be entirely devoted to Precalculus. I suggest you get yourself a brand new thick 3-ring binder and fill it with a lot of notebook paper. I will rarely pass out graphic organizers like I may have done in my lower level classes. Your notes will be your notes just like they will be in your college courses. I expect you to bring your notebook to class each day along with your text, calculator and something to write with. Nothing brings tears to my eyes quicker than hearing a student asking another to borrow a pencil seconds before the bell rings. Quite simply, if you do not have these things with you when class starts, I reserve the right to ask you to leave due to your lack of preparedness.

I will not grade your notebook but it will become a key ingredient in your success. It should be organized by chapter and you should keep all completed quizzes, tests and midterm exams in it. Students should not merely take notes for the sake of taking notes. These notes should be what you use to refer to throughout the course. Organize them accordingly.

Homework

There will be a homework assignment almost every night. Just like learning to hit a baseball, you must practice math in order to be able to understand it and use it. Doing your homework will be essential. I cannot overemphasize this. In my heart of hearts, I believe each one of you is intellectually capable of learning Precalculus. I sometimes fear that not all of you possess the work ethic, however. Many of you are so intellectually capable that in past math courses you were successful without doing homework. I believe that most of you will find Precalculus to be different. In my

experience the students who did not do well were victims of not doing the work outside of class.

Additionally, most of the homework will not be a repeat of what we do in class. It will be designed to stretch what we cover in class and because of this I need you to complete it in order to be ready for the next day's lesson. Although I believe that homework is one of the most important ingredients in your success, I will only occasionally collect it and grade it. We will spend a great deal of time in class each day going over it. When we start class, I will randomly pick students to come to the board and brief the homework problems to the class. When you are chosen to do this, **I will not accept responses such as, "I could not do that one" or "I had to work (had a game) last night."**

I expect you to do everything in your power to complete the homework assignment. Before attempting the homework problems, you should reread the section of the text related to the homework as well as your notes. Then complete the problems. Dr. Kennedy describes the homework process as having two parts: (1) finding out how to do the problem; (2) doing it. He further says there should be no restrictions on part (1). If you know how to do it, do it. If you do not seek help wherever you can find it: your study buddies, the text book, your notes, my website, other websites, your mom, dad, sister or brother, or ME. If all else fails, call me at **622-8949** or email me and I will assist you.

Collaboration is another very important ingredient in your success. Once again, if you are not prepared to discuss your homework, I reserve the right to ask you to leave class because you are unprepared. I must caution you about part (2). Even though you may have collaborated, when push comes to shove, you should understand and be able to do the problems by yourself. Finally, if I feel homework is not being done to my satisfaction, I will implement sanctions that will assist the class in getting it done.

Your homework should be neatly and thoroughly completed in your homework spiral or journal notebook. The section number should be clearly labeled for each assignment. From time to time I will collect your homework notebooks and assess them.

Reading the Text

I have carefully chosen the text we are using. It is designed to be read. It is not just there to provide homework problems. Each night I expect you to read the next section to be covered in class. You may not understand everything that is in the section and that is OK. When you read a math text you should have pencil and paper to work the problems along with the text. Make note of topics and concepts you do not understand and be sure to get these taken care of in class.

Class Participation

To be successful you must participate in class. Whether we are working on the board, I am presenting a lesson, we are discussing a topic or you are working with your team I expect everyone to be a player. Ask questions of me and your fellow students. Provide input. Take an active part. The best way to learn math is to talk about it. Math is a team sport in my class and we will have no one sitting the bench.

Portfolio

You will be assigned portfolio items for each chapter we study. They are based upon the skills you will need to be successful at the next level of mathematics. Once completed, your portfolio will be a set of notes in your own words that you will have to refer to once you take your next math course. Many students dubiously wait until the last minute before it is due to complete it. As the advice from last semester's students points out, this is ill advised. It is much better to complete the items as they are covered in class. This way you are not freaking out the night before it is due and, more importantly, by completing it along the way, you will better understand the material. This is not an optional project. If you do not submit it, you will not receive credit for the course. Late or incomplete submissions will at most be awarded 80% of the grade. More details for portfolio completion are provided in the portfolio description.

Seeking Extra Help

It is better to seek help earlier rather than later. I am typically at school by 7:15 each morning and on most afternoons I stay until at least 4:30. I will assist you with whatever your questions are. Sometimes just a few minutes of one-on-one will quickly clear up challenges.

Studying for Quizzes, Tests, Exams

Wow! Where to begin? I believe studying mathematics is an art form. I do not think I really learned how to successfully study mathematics until I was in graduate school. It is not hard really, perhaps just different. It is my personal goal to help each of you to develop your own effective style of studying mathematics. If we can do this you will be highly prepared for your college studies. Again, I believe we learn mathematics by practicing. Work problems! Before doing so, however, you must know the context from which they come. You should know how the course material is sequenced and how the topics you are studying fit in? How do definitions and theorems relate to what you are studying? Use your portfolio to help you. That is why we are constructing it. Put yourself in my shoes. What did I stress? What do you think I believe is important? Find your weaknesses and attack them. Study with someone or in a group. This saved me in many of my courses in graduate school. We all have our strengths and weaknesses but by working together we can do great things.

Finally, I want to reiterate that I really do want you to succeed. It is going to take a great deal of commitment on our parts to make this happen. I hope to foster this commitment in all that I do and will assist you in any way I can.