

DeBakey High School for Health Professions Mathematics Department

Frequently Asked Questions

What is the single most important indicator of success in mathematics courses?

Doing daily assignments is definitely the most important indicator of success. You would not expect to play on a football team if you did not attend practices. Similarly, a student cannot expect to be successful in math if he does not complete the practices. Another good example is playing a musical instrument. You would not expect to be successful in playing a musical instrument if you watched someone else play. Yet many students do just that in mathematics classes. They watch others work problems and then expect to be able to do them without trying them on their own. Actively participating in class every day leads to success. Remember that the coach gets to control the practice for his football team – your math teacher does not get to control your practice time at home. Would a coach be pleased with your use of practice time? Would you try to play a musical instrument at a recital without practicing ahead of time? Why would you try to take a quiz or test without practicing ahead of time?

I do my homework every day and listen in class. Why do I continue to struggle?

Try changing the way that you study. Study your notes before you begin your homework. Internalize the key concepts each day by creating your own method to recognize these skills again. Work examples again without referring to your notes. Do some problems independently each day. Do not let the test or quiz be the first time you try to work a problem by yourself. In addition to each day's assignment, rework those that gave you trouble from the previous assignments. Ask questions in class at appropriate times. Do not wait until the day before the test to seek your teacher's help. Analyze your efforts – if this were getting your drivers' license, would you be satisfied with your efforts or would you try a little harder?

I do great on the daily work but have trouble taking tests. Why do they count so much?

If you think about it, real life has times when a person is expected to take tests. Think about the SAT, AP, CPA, the bar, and other qualifying exams. Now is a good time to attack those skills. Ask your teacher for advice. Try doing some of each type of problems every day in a timed setting without any distractions. Your test-taking skills will improve with practice.

I know I can pass the tests if I just have more time. Why can't I come back and finish it later?

Regular classroom tests are timed just as the SAT and AP are timed. Your teachers have guidelines to determine the appropriateness of the length of tests. If you consistently take longer than the other students, then try to change. Have you considered the way you approach tests? How do you complete your regular daily work? Try completing a practice set of questions in a specified length of time every day. Include questions from each lesson on the new unit. Concentrate on your daily work as if it were a test. Get used to the idea of focusing without a friend, phone, food, or your teacher's help. Ask your teacher for advice. If you struggle on everything, then you may need to change levels. If you continue to have questions about this, it is possible to go through an identification process through 504 or special education to determine if

the modification of extended time should be given. Your teacher may not give you extended time without written confirmation from special services that you have a modification in place. It is possible to get help on this – your teacher wants you to succeed as much as you want to do so.

Why do I struggle in the next course if I passed its prerequisite?

Passing with a 70-74 is not sufficient preparation for the next course. Concepts from the previous course will be further developed and applied, and the concepts that confused you last year may come back to haunt you. If you know that you have difficulty with concepts, be proactive and work to correct it before it affects the next course.

Should a student be using a calculator in his math class?

Yes, TAKS, EOC, SAT, and AP all allow their use. Some colleges require students to purchase them and use them in their classes.

Part of the AP test for Calculus AB, and Calculus BC is non-calculator. Some colleges do not allow the use of a calculator.

Students must develop expertise with and without calculators in order to adapt to the changing expectations in the world around them. In addition, calculators allow the solution of problems that were before inaccessible. A student must also understand the underlying mathematics in order to evaluate the reasonableness of a solution. Assessments with and without calculators will occur throughout the mathematics program so that students maximize their understanding of the content in real-world applications.

Do I have to take math in my senior year?

You must take a Math course every year. You will take AP Calculus AB or BC during your senior year and it is mandatory to pass this course in order to graduate with a DeBakey Diploma...

I do not plan to be an engineer. Why should I continue to take mathematics beyond the requirements for graduation?

The world is rapidly changing. More and more jobs require advanced level mathematics. Are you certain you want to close those career doors now? It will be a lot harder to go back and do it later. Think about the number of jobs available to those with skills in technology versus those available to those in fine arts. Not everyone will find a job in his first choice of careers.

I cannot do math. I had a bad teacher last year, the last two years, my whole life.

Do something to correct it. Your present teacher reviews most key concepts as he or she teaches. Are you going to let one year destroy your academic career? You are in charge of what you learn – do not blame this year's teacher for last year's problems. There are resources – ask for help in finding them. We provide lot of opportunities for additional help. There are tutorials in the morning and after school. Take complete advantage of those tutorials. Suppose you had a wreck,

would you quit driving or work at improving until you could drive again? This does not have to be the end of your mathematics career – ask for help and then do something about it. You will have to put in some extra effort and time – it will be worth it. Math does not go away.

Why does math at DeBakey have to be so hard? My friends at _____ do not have to work nearly so hard to get the same grades.

Do you know most of our students go to college and complete their education? They are successful in achieving their career goals. Our students have repeatedly told us that the rigorous curriculum in math at our school has helped them to do well in their college courses. They were well prepared to handle the workload at college and the transition from school to college was very smooth. You will see all our students working hard because they know the importance of hard work. It definitely makes sense to work hard now and then relax and enjoy your life later on rather than not working hard now and then repenting and working hard for the rest of your life because you don't have good education to go for a career of your choice.

Getting admission to this school was a very important step in your life. We want to help you in realizing your dream and we will provide necessary encouragement and full support to you and to your parents in this endeavor.

Questions about Tutoring

Math is not a spectator sport. It is important that a student do math work independently. Imagine the shock of taking a test if you have only worked math problems side by side with your teacher or your tutor. Students have to practice working problems by themselves. Tests, quizzes, and TAKS are solitary experiences – it is necessary to get some practice on your own before you take the test – it will help to do so.

What kind of math tutoring is offered at DeBakey HSHP?

Math tutoring is available from Monday through Thursday (except first Wednesday of each month) from 3:25 to 4:25 p.m. Details about the teachers and the courses they tutor are posted in school. Tutorials are also provided from 7:15 am to 7:45 am everyday for AP Calculus and Statistics students in Mr. Desai's room (107). In addition, teachers frequently offer extra help before, after school, and during lunch with prior appointments. Check with your teacher to determine if times are available for extra help with your teacher.

Should I expect to need tutoring in order to be successful?

Regular tutoring should not be necessary unless the student is consistently weak in mathematics. If a student struggles on a regular basis, then a level change may be needed. If regular tutoring is needed at the PreAP level, then it is not the appropriate level for the student. If a student is absent in any level, then tutoring may be necessary to catch them up in the class. Tutoring should not be a substitute for using class time wisely and developing good study skills

Does outside tutoring improve performance in mathematics classes?

Sometimes, if a student continues to work in class, interacts with his regular teacher, and stays

caught up on assignments, tutoring may be an additional viewpoint, which really helps. If a student wastes class time and does not listen for the clarifying explanations, tutoring may actually lead to less success. The student's teacher best knows the expectations for success in that classroom. It is a mistake to tune that teacher out.

What are Pre- AP courses? Should I take a Pre –AP course?

Pre-Advanced Placement* (Pre-AP) classes pose different and unique challenges than those of regular classes. Pre-AP students are generally intrinsically motivated and are actively in pursuit of knowledge. This motivation drives students to want to know more information about a particular subject or topic. Pre-AP students need to be challenged in their learning process or we run the possibility of losing them due to boredom.

Curriculum for PreAP course provides the opportunity for students to fully explore what they are learning. Emphasis is on preparing students for the Advanced Placement course followed by the PreAP course. Students are exposed to problems involving critical thinking and integration of various concepts previously learned. Students are also expected to explore some concepts and learn on their own. This also allows students to make more connections with other topics. With regular classes, teachers have to spend more time to explain even lower level concepts to ensure that students understand them.

Homework for the Pre-AP classroom differs from the regular classroom as well. Generally, the Pre-AP homework will be more in depth, which will require outside reading and writing. This allows for the students to develop their thoughts to solve a variety of problems, to teach themselves and bring the information back to share with others.

Expectations for Pre-AP classes are higher than those of a regular classroom. We expect our Pre-AP students to work outside the classroom on a regular basis and to grasp concepts quickly.

PreAP students will normally experience:

- High-level content to prepare students for college level AP courses.
- Increased depth and complexity.
- Accelerated pace.
- Differentiated work from regular classroom, not just more work.

Ask yourself the following questions to decide if Pre-AP is the Right Choice for you.

- Are you self – motivated and organized?
- Did you receive 85 % or above on your most recent standardized achievement test in the subject area?
- Does your current grade in the subject area indicate past success in the subject?
- Do you complete all your homework every night? Count on studying 40 – 80 minutes per night per Pre- AP course!
- How much time can you devote to this Pre-AP course? How many other activities, extracurricular, sports, music, religious, clubs – use up your time?

Pre-AP is an opportunity that yields great rewards—but carries great responsibilities. So take a wise informed decision! Check out the policy for selection of students for Pre- AP courses, if you qualify then go for it !

Keys to success in AP Calculus AB, AP Calculus BC, AP Statistics.

- Remember, this is a college level course. Make sure that homework assignments are completed on time and you understand them. If not, ask questions during homework review.
- Study regularly (everyday). Do not postpone today's work to tomorrow. Parents, talk to your child about his/her progress and encourage them to continue working hard.
- Pay complete attention in class. Write good notes. Review notes quickly before starting on the homework problems.
- AP curriculum strongly emphasizes conceptual understanding. You will be taught concepts and exposed to problems involving those concepts. Therefore, do not expect the same problems as in your homework assignments on your quizzes and tests. However, you can expect the same concepts on the quizzes and the tests.
- Take advantage of tutorial opportunities. Do not ask for help unless you have tried to work on the problems. This way you will learn better.
Do not expect one to one attention of the teacher during tutorials if there are many students for tutorials. Join a group of students and work together. Have friends with positive attitude.
- You have a complete plan for the semester with you. Plan your other activities based on priorities. Use your time effectively. Avoid being absent from the class except for medical reasons or unavoidable emergencies. It is not easy to learn the missed concepts on your own.
- If your prerequisite skills are weak then work on them everyday. You will need a strong foundation of those skills to understand concepts in this course.
- Most of the students fail to complete college degrees requiring upper level math courses because they did not have an opportunity to take them in their school or they did not take those courses seriously.
- Don't give up any time just because it is tough. With hard work, everybody can succeed.
- Be assured that you will be provided with extra help. You just have to put in efforts and show interest in learning.
- Almost everybody graduating from our school is able to complete college degree and see their dreams come true.
You will be well prepared for the AP test to get a score of 5 so that you can get college credit. You need a score of at least 3 to get college credit. Save your money and time and earn your college degree faster.

**We have high expectations from you for a reason:
Together we can do it!**