

Transitioning to College Mathematics

Student Responsibility for Achievement As students move through their educational career they will gradually take fuller responsibility for their learning. When students begin schooling, education is primarily the responsibility of parents and teachers. The responsibility for learning soon moves to a partnership of students, parents, and teachers with the students taking additional levels of responsibility each year. Some of the student responsibilities in college classes are:

- Check answers on assignments, quizzes and tests and work to correct errors.
- Understand that the purpose of doing homework is learning mathematics, not completing the assignment.
- Know that in mathematics some skills may grow rusty and need to be relearned when needed.
- Monitor their own progress and seek assistance when needed, but work on difficulties before asking for assistance.
- Know how to study by going beyond the minimum including reading the text, going over class notes, and thinking about the mathematics they are learning.
- Do not blame others (teachers, parents, other students) for their own shortcomings.

Difference Between High School and College Mathematics

- Increased Pace: Material is presented at a faster rate and the students are expected to complete more of the work outside of class.
- Increased Workload: Many students do not realize they will have to work much harder in college mathematics. It can be said that if a student maintains the same effort, an A in high school is equivalent to a C in a college course.
- Increased Competition: Competition increases in college. A student who has been the best in the class in high school may be only average or below in college. Competition is intensified when courses are graded on the basis of only a few exams.
- Increased Level of Difficulty: College mathematics is more complex and abstract than the mathematics students encounter in high school. For the first time in their lives, some students will encounter difficulties in understanding the mathematics even when they work hard.
- Increased Student Responsibility: In college level mathematics, students must take more responsibility for their own learning.

How to be Successful in the First College Mathematics Course

- Take Expectations Seriously: This may be the most important lesson new college students must learn. They must approach their courses seriously and meet expectations to be successful. Students who can't or won't do this will fail.
- Study: The "study rule-of-thumb" of two hours outside of class for each hour in class is not sufficient for many students in mathematics courses. Students must organize their schedules for significant periods of study time free from other distractions.
- Join a Study Group: Experience shows that productive study groups can make a significant difference in achievement in college mathematics
- Get Help from Instructors: Successful students are the ones asking the questions. They go to office hours and get their questions answered, not because they are in academic trouble, but because they don't want to get into trouble.
- Keep up: It is much harder to catch up than to keep up. Keeping up promotes long term understanding which will pay off not just for a particular test but in the future as well.
- Take advantage of resources: Free tutoring is available to help students. Special courses have been set up which address topics that many beginning students find difficult. There are tutorial videos in the library as well as tutorial software in the math lab and in the tutorial center.

Recognize the Warning Signs of Failure in Mathematics. A student may be in trouble in a mathematics course when he or she:

- Does not know the instructor
- Misses class frequently.
- Says things like, "I knew the material, but I just couldn't show it."
- Says things like, "I'm almost caught up."
- Does not know the schedule for assignments or tests in the course
- Does not complete assignments or prepare for exams
- Says things like, "I can't learn this stuff because they didn't teach me right in high school."