

Tips for Success in Lower Division Math/Stat Courses

1. **Take good lecture notes.** The course material is based on what is covered in lecture and in the assigned readings. Active engagement in the lecture is crucial in getting the most out of it. Taking good lecture notes means not only writing everything that has been written on the board, but also any tips for understanding or any questions that may come up that will help you remember the concepts and ideas in lecture. Your notes should ultimately be a reference to help you study, with example problems illustrating the important problem solving strategies, and details regarding important theories, concepts, and proofs.
2. **Use the text as a supplement to lecture.** Reading the textbook before lecture is preferable, as you will have a better understanding of the material being introduced in lecture if you are familiar with it beforehand. Work out the examples before attempting the homework problems. Highlight the problem solving strategies illustrated in the examples.
3. **Work many practice problems.** Practice problems, such as the homework and text problems, as well as problems assigned in lecture and discussion sections, are important to make sure you understand the material. But don't just focus on getting the right answer! True understanding comes from doing many problems, and understanding the ideas that come up with each different problem. See each problem as a chance to develop your problem solving strategies and conceptual framework, not as a scenario that needs to be memorized. The study groups and adjunct courses offered by the Student Learning Center provides worksheets of problems designed to help you develop these strategies.
4. **Don't fall behind or cram for exams.** If you fall behind, not only will there not be enough time to catch up, but because each topic generally builds upon previous topics, you won't be able to understand the material later in the course if you are confused about material earlier in the course. Use tutoring and office hours, particularly if you are having difficulty keeping up. Cramming for exams may have modest results initially, but is useless in terms of retention. Since final exams are cumulative, cramming for exams can be a recipe for disaster. In addition, retention is important for continuing in later courses.
5. **Use professor and GSI office hours.** Most professors and GSIs encourage students to use their office hours as a way to ensure that they are getting the most out of their courses. But make sure that when you come to office hours with questions about specific problems that you do so after you have struggled with them! You will be received much more favorably when you have questions like "I tried this technique but I'm having difficulty applying it at this step" rather than "I don't know how to do this problem."
6. **Use drop-in tutoring hours.** The Student Learning Center offers free drop-in tutoring for all lower division math and statistics courses. Many students use tutoring as a way to ensure that they understand the material at the appropriate level. This is not reserved for just students who are having difficulty in a course. Often students use tutoring as a way to better understand the material that they are able to do on the homework, so they can excel with the material. But don't come expecting the tutors to give you easy answers to your homework! The tutors are trained to teach the concepts behind each type of problem, giving parallel problems that exemplify strategies, not to work directly on your homework.
7. **Work with each other.** Working collaboratively gives you an opportunity to develop your knowledge to an even deeper level. Having to defend and explain your strategies for solving a problem ensures that you understand them. Networking with others allows you to explore alternative methods of solving problems, gain perspective from your peers, and establish study partners. Many people use the SLC study groups and drop-in tutoring as a way to meet people in their courses so they can work collaboratively.