Tips for Doing Well in Calculus

Adapted from D. A. Kouba, UC Davis

- Develop effective time management and **study strategies** for calculus and other classes as well. This will help you become a more confident, successful, and well-rounded student. It will lead to a healthier balance between work time and leisure time.
- Spend at least **two to four hours** on each homework assignment. This affords you extra time to work on challenging homework problems and helps you to organize your thoughts and ideas. The more time you spend on homework, the more likely you are to articulate clear, concise questions to your classmates and teachers. **The more time you spend on homework, the less time you will spend on frantic, last-minute preparation for exams.**
- Find at least **one or two other students** from your calculus class with whom you can regularly do homework and prepare for exams. Your classmates are perhaps the least used and arguably your best resource. An efficient and effective study group will streamline homework and study time, reduce the need for attendance at office hours, and greatly improve your written and spoken communication.
- Begin preparing/outlining for exams at least five class days before the exam. Outlining the topics, definitions, theorems, equations, etc. that you need to know for the exam will help you focus on those areas where you are least prepared. *Preparing early for the exam will build your self-confidence and reduce anxiety on the day of the exam*. It's also an insurance policy against time lost to illness, unexpected family visits, and last minute assignments in other classes. Try to avoid pulling all-nighters and engaging in last-minute cramming.
- Prepare for exams by working on new problems. Good sources for these problems are unassigned problems from your textbook, review exercises and practice exams at the end of each chapter, old hour exams, or old final exams. Studying exclusively from those problems which you have already been assigned and worked on may not be effective exam preparation. Problems for each topic are generally in the same section of the book, so knowing how to do a problem because you know what section of the book it is in could give you a false sense of security. Working on new, randomly-mixed problems more closely simulates an exam situation, and requires that you both categorize the problem and then solve it.
- Use all resources of information which are available to you. These include class notes, homework solutions, your professor, teaching assistants, and your classmates. Do not rely exclusively on just one or two of these resources. Using all of them will help you develop a broader, more natural base of knowledge.
- Expect your exams to be **challenging**. If they are challenging, you will be prepared.