Math 112: Calculus I  
Syllabus: Fall 2007

Professor: Dr. Jarvis 290 TMCB, 422–2061, jarvis112@byu.edu  
Office Hours: MF 12–1 pm, Tu 2–3 pm

TA: Nathan Perry 236 TMCB, 422–7787, ncperry@nm.byu.edu  
Office Hours: W 4–5 pm, Th 12–1 pm, F 11–12 noon

TA: Brian Rushton 330 TMCB, 422–7816, brirush@gmail.com  
Office Hours: MW 11–12, Th 5–6

TA: Natalie Wilde 276 TMCB, 422–4106, natwilde@byu.edu  
Office Hours: M 9–10 am, Tu 12–1 pm, Th 11–12

Classroom and Time: 3108 JKB, MWF 1–1:50pm  

Course Webpage: New announcements, copies of course materials, other information, as well as the reading quizzes and other aspects of the course will be posted on Blackboard at http://blackboard.byu.edu Use your Route-Y id and password to log in.

Course Objectives:

1. Development of general intellectual and mathematical ability, including
   (a) The ability to learn complex new concepts independently.
   (b) An ability to recognize and correct errors in your and others’ work.
   (c) An ability to write arguments and mathematical computations correctly and accurately.
   (d) A mastery of basic logical reasoning and an ability to write simple proofs.
   (e) The ability and confidence to attack and solve an unfamiliar problem, and the discipline to keep working on a problem until you solve it.

2. Mastery of the core topics of Math 112. The list of core topics is posted on Blackboard. This is roughly the material in the first five chapters of the text.

Preparation   The prerequisites for this class are college algebra or precalculus (math 110) and trigonometry (math 111). If you have not had these courses either here or elsewhere, or if you did poorly in those courses (C or worse), you should probably take or retake them before taking this course.

Pretest: We have a (required) pretest to help you decide if you are adequately prepared to take calculus.  
The pretest and a review for it can be found at the site http://mathcourses.byu.edu. Log in with your Route-Y id and password. Click on Pretests and placement exams. Scroll down to the Math 112 section. The review is one link, the exam the other. Take care to select the 112 exam —not 119 or 110.
You must finish the pretest by *Saturday, Sep. 15 at 11:00 p.m.* You are allowed 2 chances to pass. If your score is below 75% then you are not prepared for calculus. Talk to me or your TA about your options, and what you can do to better prepare yourself.

The pretest will be worth the equivalent of 2 HW quizzes.

**Preparation Time:** Well prepared students should expect to spend a minimum of two hours out of class for every hour they spend in class. This adds up to a minimum of 10 hours per week on homework and studying. A minimal time commitment is likely to lead to an average grade (B-/C+ or lower). More time will be required to achieve excellence.

**Reading:** We do not have enough time to cover all of the reading material in class before the homework is due. You are expected to read the book and carefully study the examples yourself before the lecture on that material. You get more learning for your money if you read first and ask questions in class, than if I waste all of your class time reading the book to you or lecturing to you about things you could read. We will instead try to answer your questions, help you see why things are important, and fill in places that the book doesn’t make clear.

**Assignments:** Assignments will generally be collected in class on Mondays, Wednesdays, and Fridays. Late homework is worth half credit. All homework must be submitted by the last day of class to receive any credit.

The lowest three homework scores will not be figured into your final grade. This accommodates for minor illnesses or others disruptions to your regular schedule that might prevent you from turning an assignment in on time.

Solutions should be clearly labeled and in order. The style of your written solutions should be very much like that of a text book example; solutions should contain enough explanation so that one of your classmates would be able to easily understand what you have done. Answers given without work will receive no credit. You are welcome to study together and work together on homework assignments. However, you each must submit your own assignment. Everything you turn in should be in your own words and you should thoroughly understand everything you write down.

**Recitation Sections** The recitation sections on Tuesday and Thursday are designed to help you better understand the material covered in the big lectures. You will learn much more if you try to do the day’s homework assignment before the recitation session.

**Quizzes** We will have quizzes very often. These will be of two types.

1. **Reading quizzes:** Reading quizzes will be posted online on Blackboard ([https://blackboard.byu.edu](https://blackboard.byu.edu)). You must take these every MWF before class. These are designed to check whether you have done the reading assignment for the day.

2. **Homework Quizzes:** We will have quizzes on the homework most days in the recitation sessions (TTh). These will be short tests of the material in the day’s homework.

**Extra Credit for our Mistakes**

The TAs and I are likely to make some mistakes. I hope you will help us correct them. We will give extra credit to the first person that catches it (toward your quiz/participation scores) for each mathematical mistake, whether it is mine, the TA’s, or the book’s. There is no penalty to you if you are wrong—in fact, by asking you are helping yourself and your classmates understand better.

**Questions**
The main reason to come to the university, rather than staying at home and just reading books, is to ask questions of the teachers. If you do not ask questions, you are not getting your money’s worth.

Help
There are several free sources of help in addition to regular class time.

1. Each of the TAs has office hours three times a week (times and places will be announced). This makes a total of 9 hours per week available to you.

2. I have office hours (at a time to be announced).

3. Also, don’t use it too much; but you can get free tutoring help in the Math Lab. You may be tempted to go to the Math Lab often, but this is a bad idea. It is fine to have them help you with one or two problems, but if you don’t understand a whole assignment you need to get help from me or the TA. Do not let the Math Lab TAs work your assignment for you—if you do, you will pass the assignment but fail the exams and the class.

Missed exams
Makeup exams must be scheduled before the regular exam date. If you absolutely cannot take the exam at the regular time, you must tell me in advance so that I can help you schedule a different time to take it. Otherwise, you cannot make up the exam (unless you were in the hospital, or were victim of a major disaster).

Cheating
Although I encourage you to talk together about your homework and to study together, there are some limits that you should observe. All work that you turn in must be written by you and be written in your own words. We will not tolerate any cooperation or other cheating on quizzes or exams—it is both dishonest and unfair to other members of the class. I fully support all of the University’s penalties for cheating and plagiarism, which are generally an unforgivable F in the course and possible suspension from the university, as well as prosecution for any violations of the law.

Nevertheless, I believe in repentance; namely, if you have cheated, and if you, feeling remorse, tell me before you are caught, I will arrange with you some way to make restitution without suffering the above-named penalties. If you are sure that you are going to fail unless you cheat, come to me, and we will arrange an honest alternative.

Common Final Exam: A common final exam is given to all students in all sections of Math 112. This helps the Mathematics Department fairly assess students’ knowledge of calculus and assign grades fairly. The percentile ranking of each student relative to all students in all sections will be computed based on the final exam scores, and a curve will be determined by the Calculus Committee.

No calculators, books, or notes will be permitted during the final exam. The final exam will be given on Tuesday Dec. 18 from 7-10 p.m.

Copies of the exam from previous semesters are available at http://math.byu.edu/exams/

Grading
Exams, homework, participation, and quizzes will contribute to your grade in approximately the following proportions:
20% Homework Assignments
10% Quizzes
45% Three midterm exams
25% Final exam

Preventing Sexual Harassment: BYU’s policy against sexual harassment extends to both employees of the university and to students. If you encounter sexual harassment, gender-based discrimination, or other inappropriate behavior, please talk to your professor, contact the Equal Employment Office at 422-5895 or 367-5689, or contact the Honor Code Office at 422-2847.

Students with Disabilities: BYU is committed to providing reasonable accommodation to qualified persons with disabilities. If you have any disability that may adversely affect your success in this course, please contact the University Accessibility Center at 422-2767. Services deemed appropriate will be coordinated with the student and instructor by that office.

Caveat This syllabus is always subject to change. Additional projects, assignments, or papers may be announced later. All changes will be announced in class.