

# Summary of Teaching Experience

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## Experience

I am a graduate teaching assistant at the Department of Mathematics of the University of Georgia since September 1997. During this time, I have been teaching sections of Precalculus, Differential Calculus and Differential Calculus Labs, and have been a TA for Integral Calculus and Sequences and Series. This academic year, I am teaching Differential Calculus and Differential Calculus Lab.

## Calculus labs

Since the Fall of 1998 I have been teaching Differential Calculus Labs MATH2200L on a regular basis. Since that year, Calculus Labs were introduced as a co-requisite for the regular sections of Calculus at the University of Georgia for the first time. In the Calculus Labs, students work on projects and write reports on their investigations with the aid of Maple.

Teaching labs has provided me with a lot of experience during these five years. I always tried to take advantage of many technologies available to instructor: overhead projector linked to the instructor's computer, informative computer projects, departmental course homepage.

Usually, the grade for the lab course is based on the project alone, but I also use quizzes in my class. I choose questions for the quiz thoroughly, so that after answering them students can see where Maple can be most helpful.

## Precalculus

During Fall 2000, I was teaching precalculus MATH1113. Prior to that, I was receiving a University-wide graduate assistantship, which required me to focus more on research.

At the University of Georgia, MATH1113 is very standardized. Eighty five percent of the student's grade is determined by computer tests (one every two weeks). A detailed computerized tutorial for the student's test preparation is provided by the department. Therefore, the main challenges for the instructor is to keep students interested during lectures and to cover the material timely.

## **Calculus**

I taught calculus MATH2200 during Spring 2001 and I teach it this academic year. The syllabus for the class is standard, though instructors have more freedom. I consider word problems (applied optimization problems and related rates problems) as the most important part of the course. I try to devote to this topic as much time in class as possible.

## **Philosophy**

### **Preparation**

To be a successful teacher you need to think about teaching. In mathematics as a rule teachers know the material extremely well. So the real question I ask myself before going into class is not "What am I covering today?", but "What do I want my students to learn today?" Then it is easy to create the right plan for the class.

### **Feedback**

Perhaps aside from preparation, I think the ability to solicit, and react to, feedback is the most important attribute of a good teacher. Feedback is easier to obtain with small classes, but even in a large section I have found that it is possible to gauge how students are performing by collecting homework on a regular basis and occasionally giving random quizzes in class. This helps me to recognize more clearly their level of understanding and allows me to spend more time on difficult topics.

For this reason I often cover the material at a slower pace in the beginning of the semester, but by the time the class has a clear understanding of the basis, it naturally happens that I can present the rest of the material much faster. I also noticed that students who learn mathematics need a lot of encouragement. A slower start is a great boost to their confidence.

### **Learning Mathematics**

I believe that learning mathematics is very different from learning other academic subjects. I also think that people without very much experience in the subject do not agree

with this. When talking with students, I like to compare mathematics to sports, such as basketball: I can demonstrate free-throws all day long, but if you haven't been practicing, there is a very small chance of a miracle occurring during an exam. Understanding and being able to play are two different things.

Usually, during the test review I give my students a sample test, so they can evaluate at home if they already have enough skills. I heard from my students that most of them are failing when trying to do the sample test and that the unsuccessful attempt is the main reason for them to practice more.