Math 3A
Differential Calculus and Applications
Spring 2010

Meeting times: Tuesdays and Thursdays 8:00-9:15 in NH 1006.

Instructor: Tomás Kabbabe.

E-mail address: tomas@math.ucsb.edu

Office Hours: Tuesdays, Wednesdays and Thursdays 10 - 11 in South Hall 6432K or by appointment.

Text: Calculus: Early Transcendentals by James Stewart. 6th edition. The book is on sale at the bookstore. For further resources visit www.stewartcalculus.com

Course Description: In this class we'll learn the basic tools of differential calculus and use them in some applications.

Homework: The homework is essential in this class, as it constitutes 30% of your final grade and since the tests will be based on homework questions. The homework will be posted online. Go to the web address indicated below and sign in with your perm number as both your username and your password. Weekly homework sets will be assigned and their due dates will be on Thursdays at 6 AM. The solutions will be posted immediately after the due dates. The first homework will be posted on March 30th and it will be due on April 8th. The web address is:

http://hw.math.ucsb.edu/webwork/math3a-02-S10/

Discussion Sessions: Attendance to discussion sessions is mandatory. You will be given quizzes in discussion sessions throughout the quarter. The Teaching Assistants for this class are:

- John Mangual: mangual@math.ucsb.edu.
    Office Hours: Fridays 10-11 @ SH 6431T
        Mathlab: Tuesdays and Thursdays 1-2 @ SH 1607

- Kyle Chapman: klchapman@math.ucsb.edu
    Office Hours: TBA @ SH 6431U
        Mathlab: Wednesdays 2-3 and Fridays 3-4 @ SH 1607

Exams and Grading: We will have two midterms: The first one on Thursday, April 22nd and the second one on Thursday, May 20th. The final exam will be on Thursday, June 10th at 8 AM in NH 1006. There are two different grading schemes for this class. Your final grade will be the highest amongst these two schemes:

Scheme 1	**Scheme 2**
Quizzes: 10%	Quizzes: 10%
Homework: 30%	Homework: 30%
Midterm 1: 15%	Midterm 1: 10%
Midterm 2: 15%	Midterm 2: 10%
Final: 30%	Final: 40%

Make-ups: Make-ups for quizzes and exams will only be given with documented University-approved excuses.

ADA: Students with disabilities can get assistance from the Office of Services for Students with Disabilities (893-2668).

Further Resources:

- **Mathlab (SH1607):** The Mathlab is open every day from 12 to 5 with the exception of Fridays, when it is open from 12 to 4. There will always be two graduate students willing to help you with your homework problems. As you may have noticed from the information above, your TA will spend 2 hours each week in the mathlab.

- **CLAS:** Located in the Students Resource Building, CLAS provides specialized assistance for every lower division class, including Math 3A. For more information, visit www.clas.ucsb.edu.

Tentative Schedule:

Week 1: Functions and models.
Week 2: Functions and models. Limits, infinite limits and limit laws.
Week 3: The squeeze theorem. Continuity.
Week 4: The intermediate Value Theorem and Midterm 1.
Week 5: Derivatives. Differentiation Rules.
Week 6: Differentiation Rules.
Week 7: Implicit Differentiation. Related Rates.
Week 8: Related Rates and Midterm 2.
Week 9: Applications. L'Hospital's Rule.
Week 10: Curve Sketching. Optimization problems.