INSTRUCTOR
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COURSE
name: Calculus III (section 1-2)
meeting time: M-F at 9:30-11:05 a.m. & 11:15-12:20
meeting place: LA5-353
text: Stewart: Essential Calculus 2nd Ed ISBN 1-133-11228-0
materials: Reasonable calculator

prerequisites: The official prerequisite is a grade of C or better in Math 123. Since your skills from Calculus I and II are essential to your success in this course, I will give you a refresher quiz on the first day to help you both bring up the necessary skills into your current mathematical toolkit, and also to help you appraise your status on the required skills.

description: The course is an introduction to Multivariable Calculus. Although you have had a year of calculus, you have finally arrived to the stage where you can get real. Reality is essentially multivariable, and in this course we develop some powerful weapons on the subjects including Green’s Theorem, Stokes’ Theorem and the Divergence Theorem. A key word in your future besides the ones encountered in the first two calculus is vector, and that is exactly where we start the course.

tentative syllabus: We will cover the following chapters from the textbook:
10. Three-Dimensional Analytic Geometry & Vectors
12. Partial Derivatives
13. Multiple Integrals
14. Vector Calculus
It is a deep and packed syllabus.

bibliography: Some I believe you will find interesting are: The Historical Development of Calculus by Edwards; Calculus, An Historical Approach by Priestley, Calculus by Spivak, Second-Year Calculus by Bressoud.
goals & objectives: The main component to your growth in the course is the mastery of the material to a level that will allow you to do problem solving. A smaller component is your exposure to sophisticated mathematical language and to increase your mathematical rigor and some argumentation ability.

Mathematical Practices
1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

ADMINISTRATIVE

make-up policies: A make-up exam will be considered when you inform me ahead of time and have a reasonable excuse, or other very special circumstances.

Disability: Please inform me as soon as possible, but certainly within a week from the start of the course, of any assistance you may need to deal with any university-verified disability/special need.

ASSESSMENT The main method of assessment will be three tests:

Tests
First Midterm Exam Wednesday June 1 15%
Second Midterm Friday June 10 15%
Third Midterm Wednesday Jun 22 15%
Final Exam Friday July 1, 9:30-11:30 25%

Homework During the activity hour, daily homework will be worked on. Usually, as in most of the courses I teach, a student who has done her/his homework performs adequately in the exams.
15%

Class Participation This is mainly based on your class attendance, but some is left up to my discretion. The final grades will be assigned (approximately) traditionally 15%