Math 5B Syllabus  
Summer Session B, 2011

Instructor : K. G. Kennedy, kgracekennedy@math.ucsb.edu
Teaching Assistant : Shahab Karimi, shahab@math.ucsb.edu
Course Website : http://math.ucsb.edu/~kgracekennedy/5BSum11.html
Textbook : Vector Calculus by M. Lovric

Lecture : MTWR, 3h30-4h35 in Phelps 3515
Sections : Held Tuesday and Thursday.
Please attend the section for which you are enrolled.

Prerequisites : Math 3A-5A and supplemental information like trig identities, the quadratic formula, and the unit circle. I have posted a list of topics and some handouts on my website. There is also an ungraded HW0 on WeBWork for your practice.

Office hours :
Kennedy, Mondays 1-2PM, Fridays 1-3PM in South Hall 6432C
Shahab, Thursdays 1:30-2:30 in South Hall 6431B
Shahab in Mathlab, Tuesdays 2-3h20 in South Hall 1607

Tutoring :
• Mathlab: MTWR 11AM-4PM, F 11AM-3PM
• Another tutoring service is CLAS; Campus Learning Assistance Services (CLAS) offer free tutorial services, sign up online at http://www.clas.ucsb.edu/ or SRB 3210.

Grading :
• 30% HW
• 25% Midterm, Thursday, August 18th
• 35% Final, Thursday, September 8th in class
• 10% Section attendance and quizzes.
• Your grade on the written work will not only be for having the correct answer, but also on the quality of your solution.
• Calculator Policy: Calculators are not allowed on the midterm and final, so make sure as you do your homework, you do not rely too heavily on calculators.

Please notify me immediately after class (in person or by email) if you require special arrangements through DSP.

There will be no make-up exams, and no late work will be accepted.

Homework : Homework will be assigned through WeBWork.
• Short warm-up HW due before class on Monday.
  The goal of this is to remind you what we did the week before, so you come to class Monday prepared. The assignment will be available on Sunday.
• Longer homework assignments due most Wednesday and Friday evenings.
• Please write up complete solutions to your homework assignments.
  Though WeBWork only cares about the final answer, I care about your solution-how you write up the steps that brought you to the answer. It is important to be able to communicate mathematical reasoning orally and in writing.
• You are encouraged to work with classmates on homework, but you must write up and understand the solutions yourself. Once you discuss problems with your classmates, make sure that you do your own original write-up of the solutions.
Submitting answers on WeBWork you just received from a classmate is an honor code violation.

**WeBWork:**
- Your homework will be on WeBWork. The link will be on the course GauchoSpace by tomorrow at noon.
- There is a link to a list of functions for WeBWork at the right of your screen when you are doing a problem set.
  http://webwork.maa.org/wiki/Available_Functions

**Expectations:**
- Be respectful of instructors and classmates.
- Ask questions when you don’t understand something!
- Attend all lectures and sections and take notes.
  (You are responsible for all material covered, even if you are absent.)
- Please be on time and turn cell phones off.
- Brush up on prerequisite material if necessary.
- Understand that we are cramming 10 weeks of material into less than 6 weeks. I expect you to work twice as hard as you would during the regular quarter.
- Work with your classmates and be supportive!
  You will get your homework finished faster, and you will gain deeper understanding of the concepts by discussing them. Make sure you are explaining as well as listening, even if it is explaining back something that was explained to you.

During this course, you will
- Apply differentiation/integration rules and methods for 3A and 3B differentiate, integrate, and optimize functions with several variables
- use more advanced theorems of multivariable calculus to evaluate integrals along paths and on surfaces
- solve integrals for which the best technique is not immediately clear
- apply multivariable calculus to real world situations (i.e. physics)

At the end of this course and by studying, discussing, and practicing, you will be able to
- decide the best method to apply to integration problems you have not seen before
- express mathematics to your peers both orally and in writing
- be prepared to continue in mathematics with courses such as complex analysis, linear algebra, and Math 5C

**Tentative Calendar and Important Dates**

Week 1: Sections 1.1-3.3, Friday August 5: last day to drop/withdraw for a refund
Week 2: Sections 1.1-3.4-4
Week 3: Sections 5.1-6.2, Thursday, August 18: Midterm
Week 4: Sections 6.3-7.2
Week 5: Sections 7.3-8.1
Week 6: End of Chapter 8, Monday, September 5: Labor Day Holiday and Thursday, September 8: Final Exam in class
Sunday, September 18: Grades available on GOLD

**Academic Integrity:** judicalaffairs.sa.ucsb.edu/PDF/academicintegflyer.pdf