

Math 5B - Syllabus

Vector Calculus

Summer Session B 2012

Course:

Lecture: MTWR 3:30PM-4:35PM, PHELPS 3515

Webpage: <http://www.math.ucsb.edu/~plunkett/teaching/index.html>

Textbook: Vector Calculus, Miroslav Lovrić, ISBN 978-0-470-89578-8

Lecturer:

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Teaching Assistant:

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Office Hours: Tuesdays and Thursdays, 11:30AM-12:30PM

Course Description:

Math 5B is the first quarter of a two quarter sequence in vector calculus. The text is Vector Calculus by M. Lovric. The course covers chapters 2 through 8, including the following topics:

- * functions of several variables
- * vector-valued functions of one variable
- * scalar and vector fields
- * path integrals
- * double and triple integrals
- * surface integrals, properties, and applications
- * Green's theorem, the divergence theorem, Stokes' theorem

Grading:

Homework: 30%

Midterm: 30%

Final: 40%

Homework:

Homework will all be done online through the WebWork system. To access webwork for this course, visit <http://webwork.math.ucsb.edu>, and click on the link for Math 5B in summer session B.

Resources:

Mathlab: The math department offers free walk-in tutoring and extra help through the math lab. It is located in South Hall 1607. It is open from 11:00am to 4:00pm every day from Monday to Thursday, and from 11:00pm to 3:00pm on Fridays.

CLAS: CLAS also offers free individual and small group tutoring. These programs are very successful, and students generally find these programs helpful. For details on their programs visit <http://www.clas.ucsb.edu>.

Academic Dishonesty:

You may work together on homework but all other work must be done on your own. Cheating will result in a failing grade and will be reported to the Office of Judicial Affairs. Please check

<http://judicialaffairs.sa.ucsb.edu/StudentResources.aspx>

for more details.

Schedule:

- *August 6*: Sections 2.1 and 2.2
- *August 7*: Sections 2.4 and 2.5
- *August 8*: Sections 2.6 and 2.7
- *August 9*: Section 2.8
- *August 13*: Section 3.1 and 3.2
- *August 14*: Sections 3.3 and 3.4
- *August 15*: Section 3.5
- *August 16*: Section 4.1 and 4.2
- *August 20*: Section 4.3 and 4.4
- *August 21*: Section 4.5 and 4.6
- *August 22*: Section 4.7
- *August 23*: **Midterm**
- *August 27*: Section 5.1 and 5.2
- *August 28*: Section 5.2 and 5.3
- *August 29*: Section 5.4
- *August 30*: Section 6.1 and 6.2
- *September 3*: **No Class - Labor Day**
- *September 4*: Section 6.3 and 6.4

- *September 5*: Section 7.1 and 7.3
- *September 6*: Section 7.4
- *September 10*: Section 8.1
- *September 11*: Section 8.2
- *September 12*: Section 8.3
- *September 13*: **Final Exam**