

**MATH 61: Multivariable Calculus II**  
**Spring 2003**  
**Professor Lesley Ward**

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**Office hours:** Monday 1:15–2:30pm, Monday 4–5pm (usually), Tuesday 10–11am, Thursday 1:15–2:30pm, and by appointment.

**Tutoring/AE hours:** Sundays, Tuesdays, and Thursdays 9–11pm, Baker Room, Linde Activities Center. Graders: Jeff Jauregui, Kyle Kelley, Ben Nahir.

**Topics:** Optimization problems, second derivative test, Lagrange multipliers, the Jacobian (change of variables), Green's Theorem, conservative vector fields, parametrized surfaces, Stokes' Theorem, Gauss' Theorem, arclength, Frenet-Serret frames (time permitting).

**Required text:** S. Colley: *Vector Calculus*, Second Edition, Prentice Hall. We will cover Chapter 4, and parts of Chapters 5, 6, and 7.

**Course meets:** Mon–Wed–Fri, 8am (Section 1) and 9am (Section 2), Beckman B126.

**Web page:** Homework assignments and other useful information are posted on the course page:

<http://www.math.hmc.edu/math61/>

**Grading:**

Homework: due in class on Mondays and Fridays.

First test: two hour takehome test ((handed out **Wed 2 April**, due **Mon 7 April**)).

CORRECTION: Handed out **Friday 11 April**, due **Monday 14 April**

Second test: two hour takehome test, due by 11am on **Mon 12 May**.

The homework is worth 20% of your course grade, and the 2 tests are worth 40% each.

**Tests:** The tests will be closed-book. You may personally prepare a one-page summary (both sides ok) to use during the tests.

**Homework:** No late homework will be accepted. The lowest homework score of each student will be dropped. Please *staple* your HW, and write your name, your section number (Sec. 1 - 8am, Sec. 2 - 9am), the assignment number, and the date on it. Please follow the format guidelines for homework online at

<http://www.math.hmc.edu/~orrison/teaching/homework/>

An excellent source on good mathematical writing is the *Handbook of Writing for the Mathematical Sciences*, N. Higham, SIAM, 1998. (In Sprague Library; non-circulating.)

**Honor Code:** Though cooperation on **homework** assignments is encouraged, students are expected to write up their own solutions *individually*. That is, no copying. Comprehension is the goal, so even with cooperation, you should understand solutions well enough to write them up yourself. It is appropriate to acknowledge the assistance of others; if you work with others on a homework question, please write their names in the margin.

**Tests** are to be done individually. The HMC Honor Code applies in all matters of conduct concerning this course.

March 24, 2003