Course Description (Updated 10/10/03)

### ADMINISTRATIVE INFORMATION

**Instructor:** John M. Lee

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Office: Padelford C-546

Office Hours: Tue & Fri 2:30-3:20, Padelford C-36

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Class Web Site: http://www.math.washington.edu/~lee/Courses/324-2003, or from the

Math Dept. home page, choose Selected Course Web Pages.

Class Meetings: Math 324C: MWF 10:30–11:20, Johnson 214

Math 324D: MWF 11:30-12:20, Johnson 214

Required Text: Multivariable Calculus – Early Transcendentals, 5th Ed., by James Stewart.

Alternative Texts: Calculus - Early Transcendentals, 5th Ed., by James Stewart,

Calculus - Early Transcendentals, 4th Ed., by James Stewart.

Before you buy a book, read **About the Textbook** on the class web site.

**Exams:** Midterm: Wednesday, November 5, in class.

Final (both sections): Thu, Dec 11, 6:30-8:20pm, room TBA

Makeup final (emergencies/conflicts): Tue, Dec 16, 2:30-4:20pm, JHN 214

Prerequisite: Either 2.0 in Math 126 or 2.0 in Math 136. You should have a solid under-

standing of derivatives, integrals, vectors, parametric curves, and vector-valued functions at the level of Math 124/5/6. If it has been a long time since you took Math 126 or its equivalent, it would be an excellent idea to

review the material now.

# COURSE CONTENT

Here's the official catalog description: Topics include the chain rule, Lagrange multipliers, double and triple integrals, vector fields, line and surface integrals. Culminates in the theorems of Green and Stokes, along with the Divergence Theorem. We will cover (most of) Chapters 14, 15, and 16 in the textbook, together with a bit of (mostly review) material from Chapters 10, 12, and 13.

In brief, this course will introduce you to the concepts and computational techniques for applying calculus to scalar-valued and vector-valued functions of two and three variables. It is probably fair to say that this branch of mathematics has a broader range of practical applications than any other.

### REGISTRATION INFORMATION

These two sections of Math 324 have been filled for several weeks. It is likely that a few spaces will open up during the first two weeks of classes, as people drop the course. If you are not currently enrolled, the only way to get in is by registering on line when space becomes available; no entry codes will be given.

### **HOMEWORK**

Each week, there will be several sections assigned for you to read from the textbook. I really expect you to read these (preferably before they're discussed in class)! There is far too much material in this course for me to explain it all in detail in lectures, so reading the text will be an important component of your learning. In addition, a written homework assignment will be due each Monday, consisting of problems from the text. To save paper, I will not be passing out printed assignments; instead, you will have to get them from the class web page. Some of the homework problems may take a lot of time, so don't put them off until the day before they're due! Late homework will not be accepted except in extraordinary circumstances and with advance permission.

I encourage you to form study groups and work together on the homework problems. But when writing up solutions to hand in, you must write your own solutions in your own words; it is not permissible for the group to come up with a solution and appoint a "secretary" to write it up for everyone. In addition, please list the names of any people with whom you collaborated on the assignment. Your solutions should be written neatly, stapled in numerical order, with all of your work shown, and with answers clearly marked. Answers without work might not get any credit!! Be sure to put your name and student number on the front of your paper.

On each homework assignment, most problems will be graded on a 0–2 point scale: 2 points if it's done correctly, 1 point if you made a reasonable effort, 0 points if not. In addition, one or two selected problems will be read carefully and graded on a 0–10 point scale. You will not know in advance which problem(s) will count 10 points, so you need to do every problem thoroughly and carefully.

Note that my office hours will be held in a classroom (PDL C-36), so you're welcome to come and work on problems there, individually or in groups. Think of it as a "Math Study Center" for Math 324.

#### **EXAMS**

For each exam (midterm and final), you may bring two  $8\frac{1}{2}'' \times 11''$  one-sided pages (or one sheet written on both sides) of your own handwritten notes. No books, photocopies, printed materials, calculators, computers, or other devices are allowed.

You may not take exams other than at the scheduled time except for serious illness, religious reasons, or other extraordinary circumstances of grave personal import. To arrange an alternative exam time for reasons other than medical emergency, give Professor Lee a written request, accompanied by appropriate written documentation, no later than two weeks before the exam. Approval of such requests is by no means automatic. If you are unable to take an exam for medical reasons, you must contact Professor Lee before the exam or as soon as medically possible thereafter, and you will need to provide a written medical excuse.

## **GRADES**

Your grade will be based on a weighted average of the following scores.

20% Homework assignments

35% Midterm exam

45% Final exam