Advanced Multivariable Calculus I: Math 324 - Winter 2012

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Office Hours: MW 1:45 - 3:00 pm, F 1:45 - 2:30 pm. You are welcome to drop by my office without an appointment during any of these times. I'll also typically be available from 10:00-10:30am outside my first lecture (which is in MEB 103). And I will usually be in my office after 3pm on Mondays, so you can try to catch me then as well.

Text: *Calculus*, by James Stewart, 6th Edition. Note: We're using a custom edition of Stewart's Calculus, available at the University Bookstore. There are two volumes: Volume 1 covers Math 124/125, Volume 2 covers Math 126/324. For this class, volume 2 is needed (If you have a full version of the *6th edition: Early Transcendentals* containing both volumes that works as well). You can use an older edition of the book as long as you compare with a current edition.

Other Materials: You also need a webassign access code. If you took Math 124/5/6 last year, then the code you purchased should still work. You shouldn't need to enter anything, you should be able to just log on. Please log on before Friday to make sure you can view the first assignment. If you have never purchased a webassign access code for calculus, then you will need to purchase an access code (see my website).

Course Objectives: This course is a continuation of Math 126. The focus is mostly on integration in multiple variables. We discuss Chapter 15: iterated integrals (double and triple), a bit of Chapter 14: Gradient and Derivatives, and then the rest of the term is about Chapter 16. Chapter 16 introduces line integrals, vector fields, surface integrals and ultimately how to calculate them using the Theorem of Green, Stokes, and Gauss. This course is 'end-loaded', in that there are a lot of big topics in the last two weeks. So be ready for that!

Grading: The weight for each part of the course is given below.

Category	Weight
Test Prep Quizzes (**Completed On Fridays**)	5
Homework (**Due on Webassign**)	15
Midterm 1 (**THURS, Jan. 27**)	24
Midterm 2 (**THURS, Feb. 24**)	24
Final Exam (**See below**)	32
Total	100

Lecture: Lecture is on Monday, Wednesday, and Friday. You will be held responsible for all information that is discussed during lecture.

Homework: Homework assignments will be assigned and collected via Webassign. Please log into webassign this week and add yourself to the course roster via the link: https://www.webassign.net/washington/login.html Homework will generally be due at 11:00 pm on Wednesday (see the course calendar for specific due dates). Make sure to log onto Webassign as soon as possible and attempt the first several homework problems to make sure you understand how everything works.

Exams: The midterms will be 50 minutes long and will be given at lecture. The Final Exam is cumulative.

MATH 324 C FINAL EXAM: Wednesday, March 14, 2:30-4:20pm in MEB 103

MATH 324 D FINAL EXAM: Thursday, March 15, 8:30-10:20am in LOW 205

Calculators and notes: You will need a scientific calculator for Math 324. It must have trigonometric functions, like Sin and Cos, as well as logarithms and exponentials (ln and exp). **GRAPHING CALCULATORS ARE NOT ALLOWED** on quizzes and exams in Math 324. A graphing calculator is any device with a multiline display that has the ability to graph mathematical functions. See your TA before the first midterm if you are not certain if your calculator is acceptable. A single, **hand-written** 8.5 x 11 inch sheet of notes is allowed during exams. You may write on both sides.

Make-Ups: *Late homework will not be accepted for any reason.* In case of observance of religious holidays or participation in university sponsored activities, arrangements must be made at least 1 week in advance for exams. You will be required to provide documentation for your absence. *Make-up exams will not be given.* If you miss an exam due to **unavoidable, compelling, and well-documented** circumstances, your final exam will be weighted more heavily.

Class Philosophy: There are two vital rules for success in my classroom.
1. THE HOMEWORK IS THE KEY: In mathematics, breakthroughs in learning rarely occur while reading the text or attending lecture. Mathematics is truly learned when you completely solve a problem AND understand the underlying concepts and tools so as to be able to apply them to related problems. The lecture, tutorial sessions, and office hours are valuable tools in guiding you towards learning and discovery, but ultimately the concepts and solutions must be absorbed, understood, and applied by you alone. Treat each problem as an exam question and ask yourself, "Can I answer this question without any help and do I understand the underlying principles that this problem conveys?" If your answer is no to either of these question, then you need more studying and practice.
2. ASK FOR HELP: Most students will hit a wall at some point during the course. Some can't handle the large workload, while others find difficulty with specific concepts in the course. When these times arrive remember to ask for help. Come to me, ask your classmates for help, visit CLUE and/or visit the student counseling center. These are just a few of your options. Please, please, please find help earlier rather than later. You are all smart enough to do well in this course, the question is whether or not you are determined enough.

Resources:
• A link to the class website can be found at: **http://www.math.washington.edu/∼aloveles/** You will find homework assignments, review sheets, grade information, a calendar for the term, and various bits of other useful information there, including past exams and quizzes, TA information, etc.
• The Center for Learning and Undergraduate Enrichment (CLUE) holds drop-in tutoring sessions every weekday evening in Mary Gates Hall Commons. See
http://depts.washington.edu/clue/ for more details.
• The University of Washington is committed to providing access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation contact the Disability Services Office at least ten days in advance at: 206-543-6450/V, 206-543-6452/TTY, 206-685-7264(FAX), or dso@u.washington.edu.
• The Student Counseling Center provides academic skills workshop on a variety of topics including stress management test anxiety and time management to help you succeed at the University of Washington. If any of these is an issue for you, check out the schedule of workshops at
http://depts.washington.edu/scc/studyskills.html .