Math 241- Spring 2006: Calculus of Several Variables

Instructor: Dr. Alex Freire
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1 General Information

- Section 5, MWF 12:20-1:10, Ayres 314 (Tu: 1:25-2:15, Ayres 314)

  Section 7, MWF 3:35-4:25, Ayres 314 (Tu: 3:35-4:25, Ayres 318)

  Remark: Ordinarily there will be no lecture on Tuesday; Tuesday classes will be reserved for discussion sessions with a TA or exams.

- Office Hours: MWF 2:00-3:00, Ayres 207A- or by appointment (e-mail)

- Text: there is NO required text for the course; feel free to consult any multivariable calculus text you want. The bookstore has a small number of copies of two *recommended* texts:

  A MATLAB companion for multivariable calculus by J. Cooper (Academic Press);

  Vector Calculus by P.C. Matthews (Springer-Verlag)

- Prerequisite: Calculus of 1 variable (M141 and M142)-working knowledge assumed.

2 How this course will work

The course is based on a series of *problem lists*; relatively little time will be spent lecturing on the theory (I expect you to read independently); instead, class time will be spent discussing each problem on the list, introducing definitions and results as they become necessary.

There will be about 30 versions of each problem list, with the same problems, but different numerical data- so each student will be working on a personalized list. (*If the list is lost, it is not recoverable- you will need to start over with a new list.* The complete set will be due (as homework) at the start of the class following the one in which I finish discussing the list (there will be 10-15 problems per list, so if you wait until then to start working on it, you will be unlikely to finish in time.)

Late homework will not be accepted. Graded homework/exams which are not picked up in class will be kept for one week, and then discarded.

Attendance: Attendance to every class is expected. I will take attendance on most days (MWF). I am required to forward to the Registrar's Office the names of students receiving financial aid who are not attending regularly. In addition, the attendance record will affect the final grade (in borderline cases).

Use of mathematical software: I plan to use MATLAB graphics in class on occasion, when the topic warrants it. In general, it would be a good idea to become familiar with the basics of MATLAB (available in the Ayres Hall, Hodges library and School of Engineering computer labs. However, this will be completely optional. If a suitable (and correct)MATLAB plot is included with a homework solution, you will probably get a few extra points for that solution.

The mathematics department policy on classroom behavior (see link) will be enforced; violations will be reported to the Associate Head for Undergraduate Studies (Dr. Charles Collins).

Please review also the sections of Hilltopics dealing with 'academic dishonesty' (cheating)- p.19/20 of the 2005-06 edition. The penalty for cheating on an exam will be a grade of 0 on that exam for a 1st offense, grade F in the course and referral to an Academic Review Board for a second offense.

Important dates: drop w/o W: 1/20; drop w/ W: 2/21; drop w/ WP-WF: April 4; spring break: 3/20 to 3/24; last class: April 28; final exam: May 9, 12:30 section 5); May 8, 5:00 (section 7)

I won't be using Blackboard, but you should check the 'course log' link in the freire/M241 page often- I will post announcements (inc. homework problems and test dates) there.

3   Grading, Homework and Exams

In addition to the homework average (best 10 of 12 sets), there will be three in-class exams (50 min) and a final. The exams will include selected problems from the problem lists, and also conceptual questions; exam dates will be announced about 1 week in advance.

Of the 5 grades, only the highest 4 will be used to compute the course average (all with the same weight.)

POLICIES:

(i) There will be no makeups of exams. Students missing one exam will drop the corresponding grade; for a second missed exam, if a valid justification (illness, university activity) is presented *in advance*, the average of the remaining 3 grades will be used (if no justification is given prior to the exam, the grade is zero.) It is not possible to pass the course if more than 2 exams are missed.

(ii) ***I do not 'grade on a curve'***: your grades will be independent of how the rest of the class performs. I will not report statistics of exam grades.

(iii) There will be no 'extra credit' assignments.

(iv) Expected grading scale: below 50-F; 55-69: C or C+; 70-84: B or B+; 85 or above: A.

IMPORTANT: Feel free to ask questions in class if there is something you don't understand. There is a certain etiquette to be observed: the question should refer to the problem being discussed- not a previous problem, or a general policy item. (General questions should be asked either at the beginning of lecture, or the very end). For example, the question 'which problem lists will be on the exam?' is appropriate at the beginning of class, but the question 'will this be on the test?' is not OK when I'm discussing a problem.

Students with disabilities: if you need special arrangements to take this class (including exams) due to a disability, please contact the Office of Disability Services (2227 Dunford Hall, 974-6087 V/T, http://ods.utk.edu/)