Math 208H Calculus III
Section 001

Lecture: MWRF 9:30-10:20 Oldfather (OldH) 208

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WWW pages for this class: http://www.math.unl.edu/∼mbrittenham2/classwk/208s14/
(There you will find copies of nearly every handout from class, lists of homework problems assigned, dates for exams, etc.)

Office Hours: To be determined. I'm also available whenever you can find me in my office and I'm not horrendously busy. You are also quite welcome to make an appointment for any other time; this is easiest to arrange just before or after class, or via email.

Text: *Calculus: Single and Multivariable*, by Hughes-Hallett, Gleason, McCallum, et al. (Wiley, 2011) 5th edition.

ACE outcome 3: This course satisfies ACE Outcome 3. You will apply mathematical reasoning and computations to draw conclusions, solve problems, and learn to check to see if your answer is reasonable. Your instructor will provide examples, you will discuss them in class, and you will practice with numerous homework problems. The exams will test how well youve mastered the material.

This course, as the name is meant to imply, is a continuation of Calculus II. It focuses on functions of several variables, and the development of differential and integral calculus for these new objects. We will pick things up where Calculus II left off, and (skipping Chapter 11) essentially work our way through the last third (well, 40% !) of the text. In particular, we will cover the following chapters of the book:

Chapter 12, Functions of Several Variables
Chapter 13, A Fundamental Tool: Vectors
Chapter 14, Differentiating Functions of Several Variables
Chapter 15, Optimization: Local and Global Extrema
Chapter 16, Integrating Functions of Several Variables
Chapter 17, Parametrization and Vector Fields
Chapter 18, Line Integrals
Chapter 19, Flux Integrals
Chapter 20, Calculus of Vector Fields

This may look like a lot of material, and in some sense it is! But several of these chapters consist of only 3 or 4 sections.

Homework will be assigned from each section, as we finish it. It is an essential ingredient to the course - as with almost all of mathematics, we learn best by doing (again and again and ...). Cooperation with other students on these assignments is acceptable, and even encouraged. However, you should make sure you are understanding the process of finding the solution, on your own - after all, you get to bring only one brain to exams (and it can't be someone else's). For the same reason, I also recommend that you try working each problem on your own, first. Some portion of the homework will be collected and graded; it will count 120 points toward your final grade

Quizzes will typically be held one day each week (probably Friday), at the end of class, unless that week includes an exam (in *our* class...). They will cover material presented in class through the previous Wednesday (or appropriate corresponding day). Your lowest two quiz grades will be dropped before computing your quiz score, which will count 120 points toward your grade. A missed quiz will count as zero (and will therefore be the first grade dropped); a make-up quiz can be arranged only under the most unusual of circumstances.

Midterm exams will be given two times during the semester, **in the evening, outside of normal class time**, on dates which will be determined in consultation with the class. The specific dates will reflect when we have reached particular points in the material: the end of Chapter 15 (mid/late-February?) and the end of Chapter 18 (end of March?) Each exam will count 100 points toward your final grade. You can take a make-up exam only if there are compelling reasons (a doctor SAYS you were sick, jury duty, etc.) for you to miss an exam. Make-up exams may be harder than the originals (because make-up exams are harder to write!).

Finally, there will be a regularly scheduled **final exam**, on Wednesday, May 7, from 10:00 to 12:00 noon. [Note that this is the time determined by our class meeting time, and is **not** the 'unit' final exam time for Math 208. We do not take the unit final exam.] The final exam will cover the entire course, with a slight emphasis on material covered after the last midterm exam. It will count 160 points toward your grade.

Your course grade will be based upon this total of $120 + 120 + 2 \times 100 + 160 = 600$ points, and will be converted to a letter grade, taking into account the overall average of the class. However, a score of 90% or better will guarantee some kind of **A**, 80% or better at least some sort of **B**, 70% or better at least a flavor of **C**, and 60% or better at least a **D**.

Stay current! In mathematics, new concepts continually rely upon the mastery of old ones; it is therefore essential that you thoroughly understand each new topic before moving on. Our classes are an important opportunity for you to ask questions; to make <u>sure</u> that you are understanding concepts correctly. Speak up! It's <u>your</u> education at stake. Make every effort to resist the temptation to put off work, and to fall behind. Every topic has to be gotten through, not around. And it's a lot easier to read 50 pages in a week than it is in a day. Try to do some mathematics every single day. **Class attendance** is probably your best way to insure that you will keep up with the material, and make sure that you understand all of the concepts. [And on a more pragmatic note, the intructor writes the exams, so it pays to know what the instructor said!] Even more, **stay ahead!** You are strongly encouraged to read the section to be covered in class prior to its presentation in lecture; this will both improve your ability to follow the lecture and help to focus your attention on any areas where extra effort on your part will be required.

Cell phones should be silenced for the duration of all classes, and <u>extreme</u> restraint should be exercised in answering a call during class. If you feel that you must answer a call, please excuse yourself from the room before beginning to take the call.

Due to the vast range of **calculators** available these days, with widely differing capabilities, the use of calculators will not be allowed in quizzes or exams. In the end, it is not *what* the answer is but *how we arrive at* the answer which will be most important to us; so only the most routine arithmentic computations need to be carried out before we will declare ourselves to "have" the answer to a problem.

The **Math Resource Center** (MRC) is located in Avery 013B, and students in Math 107 are encouraged to use this resource if they have questions related to this course, or as a place to meet and discuss material from the course. Hours for the MRC are MTWR 12:30 - 8:30 pm, F 12:30 - 4:00 pm, and Su 1:00 - 5:00pm.

Departmental Grading Appeals Policy: The Department of Mathematics does not tolerate discrimination or harassment on the basis of race, gender, religion or sexual orientation. If you believe you have been subject to such discrimination or harassment, in this or any math course, please contact the Department. If, for this or any other reason, you believe your grade was assigned incorrectly or capriciously, appeals may be made (in order) to the instructor, the Department Chair, the Departmental Grading Appeals Committee, the College Grading Appeals Committee, and the University Grading Appeals Committee.

ADA Notice: Students with disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska-Lincoln to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office [www.unl.edu], 132 Canfield Administration, 472-3787 voice or TTY.

Course Evaluation: The Department of Mathematics Course Evaluation Form will be available through your Blackboard account during the last two weeks of class. You'll get an email when the form becomes available. Evaluations are anonymous and instructors do not see any of the responses until after final grades have been submitted. Evaluations are important—the department uses evaluations to improve instruction. Please complete the evaluation and take the time to do so thoughtfully.

Some important academic dates

Jan. 13	First day of classes.
Jan. 20	Martin Luther King Day - no classes.
Jan. 24	Last day to withdraw from a course without a **'W'**.
Oct. 18	Last day to change to or from P/NP.
Mar. 2	Last day to change to or from P/NP.
Mar. 23-30	Spring break - no classes.
Apr. 11	Last day to withdraw from a course.
May 3	Last day of classes.
May 5-9	Final exam week.
May 7	Math 208H final examination.