## MATH 2443–Section 004 Honors Calculus IV

This is the information sheet for Honors Calculus IV, MATH 2443—Section 004, for the Fall Semester 2003. It is your responsibility to acquaint yourself with all the information in this handout, and with any modifications to it that may be announced in class.

Instructor: Dr. Noel Brady. E-mail: nbrady@math.ou.edu
Office: 521 Physical Sciences Center [PHSC]. Phone: 325-0833

Web Page: http://math.ou.edu/~nbrady

Math Office: 423 PHSC. Math Office Phone: 325-6711

Course Web Page: http://math.ou.edu/~nbrady/teaching/f03-2443 Office Hours: Tue: 9:15am-10:15am, Wed: 10:00am-11:00am, Thu: 9:00am-10:00am.

**Text and Course Outline:** We shall cover Chapters 15, 16 and 17 of the textbook; *Calculus* (4<sup>th</sup> Edition), by James Stewart.

In Chapters 15 and 16 we "redo" all Calculus I and II material (basic differentiation and integration), but this time for functions which can have more than one input variable. This leads to some ideas which you will feel comfortable working with from the start (such as partial derivatives, and the anti-differentiation parts of computing multiple integrals), some concepts which will seem familiar but will involve a new twist (such as the chain rule and the multi-variable version of the second derivative test and max/min problems), and some entirely new creatures such as Lagrange multipliers, and gradient vectors.

In Chapter 17 we will study vector calculus. Two procedures which you will have to master are how to compute line integrals, and how to compute surface integrals. Then we will learn about three beautiful higher dimensional versions of the Fundamental Theorem of Calculus; Green's Theorem, Stokes' Theorem, and the Divergence Theorem. There'll be lots of cool applications along the way.

**Prerequisites:** Math 2433 (Calculus III), or instructor's permission.

Lectures: You are expected to attend all lectures, and are responsible for all information given out during them. In particular, this includes any changes

to the quiz/midterm dates or content. As in any course, you should try to read the relevant sections of the textbook **before** attending lectures.

**Grading Scheme:** Grades will be assigned by weighting your totals from Homeworks, Quizzes, Midterms, and a Final Examination as follows:

Homeworks	15%
Quizzes	6%
$Midterm\ Total$	54%
Final Examination	25%

Here is a detailed description of each of these components. The total number of points in the course is 100.

**Homework:** Homework will be due at the **start** of class on Thursdays. You are responsible for ensuring that your homework gets turned in on time. Late homework will not be accepted; it upsets the grading process and is unfair to other students.

The homework assignments are there to provide you with a **minimum** level of exposure to the materials outside of class time. You will need to do many more problems before you feel comfortable with the concepts involved. Take it from experience (of generations of students!) that the way to succeed in a math course is to work (and understand) a large number of problems.

Quizzes: Three 10-minute Quizzes are held in class during regular lecture times. Here are the quiz dates.

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Quiz 1: Thursday, Sept. 11.
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Quiz 2: Thursday, Oct. 16.

Quiz 3: Thursday, Nov. 20.

**Midterms:** There are three midterms, two of which are held during regular lecture times, and the third is a set of extra homeworks. They are held/due on the following dates:

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Midterm 1: Tuesday, Sept. 23.
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Midterm 2: Tuesday, Oct. 28.

Midterm 3: Last part due on Tuesday, Dec. 2.

**Final Examination:** The final examination is cumulative. It is scheduled for Tuesday, December 16 from 8:00am until 10:00am, and is held in the usual classroom — PHSC 115.

Taking Examinations: Here are a few notes on taking Examinations.

- I will hold extra Office Hours and/or schedule Review Sessions before the Midterms and Final Examinations. You are strongly encouraged to attend the Review Sessions, and to attend Office Hours regularly.
- You cannot use calculators/computers, books or any type of notes during the examinations.
- All examinations must be taken at scheduled times, except in *very extreme circumstances*. So be careful not to make travel arrangements that conflict with examination times. If you cannot take an examination at a scheduled time, you should contact me *well in advance of the test time*. Otherwise, an absence at an exam will result in a score of zero.

**Policy on W/I Grades:** Until September 8, there is no record of grade for dropped courses. From September 9 through October 3, you may withdraw and receive an automatic W grade, no matter what scores you have so far achieved. From October 6 onward you will need to see me about grades if you wish to withdraw. From November 3 on, University regulations specify that you may withdraw only with the permission of the Dean.

Students who are failing the course should not expect to receive an I grade in place of a W grade. I will only consider assigning an I grade if the student is already maintaining a passing grade, has completed most of the course work, and can demonstrate that he/she is unable to complete the work at this time due to circumstances beyond their control.

**Academic misconduct:** Students should acquaint themselves with the Provost's Academic Integrity Guide which can be found on-line at the following address. www.ou.edu/provost/integrity.

Accommodation of Disabilities: Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible to discuss the accommodations necessary to facilitate his or her educational opportunity and ensure his or her full participation in the course.