

# MATH 2443–008      Calculus IV

This is the information sheet for Calculus IV, MATH 2443–Section 008, for the Spring Semester 2014. 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.

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**Phone:** 325-0833

**Web Page:** <http://math.ou.edu/~nbrady>

**Math Office:** 423 PHSC.

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**Class Times:** The class meets 3 days per week: on Mondays, Wednesdays and Fridays in 359 PHSC from 12:30pm to 1:20pm.

**Course Web Page.** <http://math.ou.edu/~nbrady/teaching/s14-2443>

**Office Hours.** Held in 521 PHC. Tue and Wed 9am-10am, Thu 11am-noon, or by appointment.

**Text and Course Outline.** We shall cover Chapters 14, 15 and 16 of the textbook; *Calculus* (7<sup>th</sup> Edition), by James Stewart, Brooks/Cole 2012.

In Chapters 14 and 15 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 16 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 will be lots of cool applications along the way.

**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 midterm dates or content.

Your participation is important in lectures. I will call on people to present answers to problems at the board from time to time. You should try to participate in classroom discussions. As in any course, you will optimize your gain from the lectures if you try to read the relevant sections of the textbook **before** attending class.

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

<i>Homework</i>	15%
<i>Webwork</i>	6%
<i>Midterm Total</i>	54%
<i>Final Examination</i>	25%

The total number of points in the course is 100. Grades are assigned on the following scale:

A : 85 – 100,   B : 70 – 84,   C : 55 – 69,   D : 40 – 54,   F : 0 – 39.

Here are more details about each of these components.

**Homework.** Homework is due in class at the **start** of class. Due dates are posted on the course home page. 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.

**Webwork.** Part of your homework will not be written up and turned in, but instead will be entered into an online system called *Webwork*. As the course gets underway I will provide more detailed information about using Webwork

**Midterms.** There are three midterms; they are held on the following dates:

*Midterm 1:* Friday, Feb. 14.

*Midterm 2:* Friday, Mar. 14.

*Midterm 3:* Friday, Apr. 18.

**Final Examination.** The final examination is cumulative. It is scheduled for Monday, May 05 from 1:30pm until 3:30pm, and is held in the usual classroom — PHSC 359.

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

- I usually 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 *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.** You can find the Spring 2014 academic calendar at

[http://www.ou.edu/content/admissions/academic\\_calendar.html](http://www.ou.edu/content/admissions/academic_calendar.html)

Until Jan. 27, there is no record of grade for dropped courses. From Jan. 28 through Mar. 28, you may withdraw and receive an automatic W grade, *no matter what scores you have so far achieved*. From Mar. 31 onward, University regulations specify that you may withdraw only with the permission of your College 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 situation satisfies the following criteria.

1. the student is already maintaining a passing grade,
2. the student has completed most of the course work, and
3. the student can demonstrate that he/she is unable to complete the work at this time due to circumstances beyond his/her control.

**Academic misconduct.** You should be familiar with University policy regarding academic misconduct

<http://integrity.ou.edu>.

**Accommodation of Disabilities.** The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. If you require special accommodation in this course you

are requested to speak with me as early in the semester as possible (preferably by the end of the first week). Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in Goddard Health Center, Suite 166, phone (405) 325-3852 or TDD only (405) 325-4173. Their website is at <http://drc.ou.edu>.

**Religious Holidays.** It is the policy of the University to excuse absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required class work that may fall on religious holidays.

Students who plan to observe a religious holiday which may conflict with a class time, should notify me as soon as possible (preferably within the first week of the semester), so that we can make appropriate arrangements.

**Mathematics Department student resource page.** The [Undergraduate Information](#) page on the Mathematics Department server is a good resource. It has links to the Math Center, the OU MathClub blog, and has information about obtaining a Mathematics minor or major.

**The Math Center.** The [Math Center](#) (PHSC 209) is open 5 days a week. It is staffed by mathematics graduate students who can help with your Math 2443 questions. You should definitely take advantage of this terrific resource!

**The OU MathClub Blog.** The [OU MathClub blog](#) is an excellent way of finding out what's going on math-wise at OU.