

# Calculus II – Spring Semester 2012

## Syllabus

Math 2153.7 MWF 2:30 – 3:20 HSCI 134

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### Basic Information

The textbook is *Calculus (Early Transcendentals)* by James Stewart. We shall cover much of Chapter 7 (Techniques of Integration), Chapter 8 (Further Applications of Integration), Chapter 10 (Parametric Equations and Polar Coordinates), and Chapter 11 (Infinite Sequences and Series). The class is a continuation of Calculus I, and it is essential to know the material covered in that class well. In addition, we will use a fair amount of basic algebra and trigonometry.

We are required to use the WebAssign system for homework. You will need to self-enroll online at <https://www.webassign.net/login.html> using the class key “okstate 3118 6758”. You should do this as soon as you are sure that you intend to remain in this section.

Calculus II is notorious as the most difficult class of the Calculus-Differential Equations sequence, and this reputation is probably deserved. In particular, it is quite a bit more difficult than Calculus I, both in terms of conceptual challenges and in terms of technical demands. To succeed in the class, it is essential that you attend regularly, do not get behind or attempt to cram for exams, seek help promptly when you cannot understand a topic or solve a problem correctly, and work through the sections of the textbook that are discussed in class. There is too much material for me to be able to cover every detail in my lectures, but you are responsible for learning everything in each of the sections that is discussed in class.

### Grades

Your grade in this class will be based on your performance on three preliminary exams, a final exam, WebAssign and possibly other homework, and in-class quizzes. The weights of each of these categories are as follows:

EXAM 1	16%
EXAM 2	16%
EXAM 3	16%
FINAL EXAM	26%
HOMEWORK	20%
QUIZZES	6%

The dates of the preliminary exams and quizzes are shown on the course schedule. The final exam will

be comprehensive. It will be held in HSCI 134 on Monday, April 30 from 2:00 — 3:50. There are eleven WebAssign assignments, of which the best ten will count towards your grade. The due dates have already been set and are available via WebAssign. If necessary, additional homework will be assigned in class. A total score of at least 90% will ensure an ‘A’, a score of at least 80% will ensure at least a ‘B’, a score of at least 70% will ensure at least a ‘C’, and a score of at least 60% will ensure at least a ‘D’.

### **Calculators and Related Issues**

You will require at least a scientific calculator for this class. A more sophisticated calculator will sometimes be helpful, but is not necessary. The Mathematics Department has graphing calculators available for check out to students who are enrolled in mathematics courses. Note that you will not be permitted to use any device that can establish a connection to a cellular or wireless network during quizzes and exams. This means, for example, that you cannot use a cellphone calculator app or a tablet computer at these times.

The main reason that you will need a calculator is that in Chapter 11 there will be some numerical computations that cannot reasonably be done by hand. There are other times at which a calculator may be useful in detecting errors. For example, if you calculate that the area of a certain region is equal to  $\ln(1+\sqrt{5})-(6/5)$  then you must have made a mistake, because a calculator will tell you that this number is negative and areas must be positive. *Note that you should always give answers exactly unless the problem statement specifies otherwise.* So, for example, if the answer to a problem is  $(\pi\sqrt{2})/7$  then you should report it in this form rather than as a decimal approximation such as 0.6347.

More sophisticated calculators can evaluate integrals and derivatives and so can be used to check answers to some problems directly. I encourage you to learn how to use a calculator for this kind of checking. However, you are required to learn to do these kinds of calculations by yourself and so simply reporting an answer that you got from a calculator will never receive credit. *You must always show enough work that I can understand what you did and evaluate whether or not it was correct.*

### **Missed Work**

The Mathematics Department suggests a policy on missed work, which I shall be following in this class. Here it is in full:

- (A) Every student shall be offered reasonable accommodation in the event that he or she misses a major assessment activity for a valid and documented reason.
- (B) Appropriate documentation shall be provided by the student in a timely fashion to support his or her request for accommodation.
- (C) Major assessment activities are those such that a zero on that activity could reasonably be foreseen to impact the student’s grade substantially; this category includes, but is not limited to, exams.
- (D) Valid reasons include official University activities, activities associated with military service, illness, family emergencies, mandatory court appearances, and any other events of comparable gravity.

(E) Reasonable accommodation means that the student will be given the opportunity to earn a grade on the assessment activity that is based on criteria as similar as possible to those used to grade his or her classmates. This opportunity should normally be made available in a timely fashion.

What all this means is that if you have to miss a quiz or exam for a *serious* reason, *and you are able to provide acceptable documentation verifying that reason*, then you will be allowed to make up the missed work. If you have a scheduled University activity (like a field trip or sporting event) then it is normally best to do this beforehand. I try to be flexible and fair, so if you encounter an unusual circumstance then it is worth at least asking about make-up work, although I might say no.

### **D2L and E-Mail**

I use OSU's online classroom (D2L) to post important information about the class. I suggest that you add a little basic information to your D2L profile, particularly if you are interested in studying with other students in the class. I use email to contact individual students and the class as a whole. This means that you must check your OSU email regularly. If you prefer to use another email address then you should arrange to have your OSU email forwarded to that address.

### **The MLRC**

The MLRC ("Mathematics Learning Resource Center") is currently located on the fourth floor of the Classroom Building (CLB). The Information Desk is in CLB 420. You can find the MLRC home page at the URL <http://www.math.okstate.edu/mlrc/> This center offers tutoring services for classes up to Linear Algebra.

### **Miscellaneous Information**

You should read the syllabus attachment for Spring 2012, which I shall post on D2L. This is a document that outlines some of the general academic policies of the University, as well as listing important dates.

You are subject to the University's policy on academic integrity. Information about this policy may be reached from the Division of Academic Affairs web page at <http://academicaffairs.okstate.edu/>