2014

MATH 171-02 Calculus II

Dena Morton
Calculus II  
MATH 171-02  
Spring 2014  
Syllabus

Time:    MW 11:00-11:50  
        TR 11:30-12:45

Classroom: Hailstones Hall 17

Instructor: Dr. Dena Morton  
Office: Hinkle 108  
Phone: x3674  (Note: I do not check my voice mail very often.)

Office Hours:  
- Mondays from 12:00-1:00  
- Tuesdays from 2:30-3:30  
- Wednesdays from 12:00-1:00 (except when we have a department meeting that day; then office hours will be from 10-10:50 am – I will announce when this will happen).  
- Thursdays from 2:30-3:30  
and by appointment

e-mail: morton@xavier.edu  
Note: this is the best way to reach me – I check my e-mail on a regular basis.

Web Page: http://cerebro.xu.edu/~morton/aclasses.html  
Note: I update my webpage every day – all homework assignments and readings are always posted online. Also, check out the beautiful mathematical pictures!

Prerequisite: Calculus I

Text: Calculus from Graphical, Numerical and Symbolic Points of View, second edition, by Ostebee and Zorn. You will need to read each section briefly before it is covered in class and then in more detail after it is covered in class.

Purpose: Calculus was first discovered by mathematicians searching for the answers to two “basic” questions:  
1. What is the slope of a tangent to a curve?  
2. What is the area under a curve?  
In Calculus I (MATH 170) we explored these two questions in depth, but focussed more on the first question: the slope of a tangent. This semester we will continue our investigation of the second question: the area under a curve. We will investigate numerical integration, the uses of definite and improper integrals, learn more techniques of antidifferentiation, investigate series and sequences, express functions in a new form as series and explore polar curves. (Sounds cool, eh?)
It is essential that you be conscientious about completing both the reading and the computation assignments on time, and at least attempt every assigned problem. Questions are welcome at any time during class. I encourage you to participate actively in class by asking questions and by answering questions posed by either myself or by other students.

**Content:** After a brief review of antidifferentiation, we will continue our fascinating exploration of the world of calculus. This semester we will cover most of chapters 6-11 and chapter V, discussing the following topics: numerical integration, uses of the definite integral, more antidifferentiation techniques, improper integrals, infinite series, and polar coordinates.

**Homework:** Reading assignments and homework will be assigned daily. Doing homework for this course is the best way for you to pinpoint difficulties. It is also a wonderful learning tool. I will take questions about the homework at the beginning of each class session.

**Class Activities:** Classes will consist of small group activities, discussion, individual activities, and lectures.

**Quizzes:** Weekly quizzes will be given on Thursdays and are graded on a 10-point scale. The lowest quiz score will be dropped, so makeup quizzes will not be given. Quizzes will not be given during exam weeks. Many quiz problems will involve statements of definitions; if you don’t know the definitions, you cannot possibly expect to do the mathematics.

**Exams:** There will be five exams given throughout the semester, each consuming an entire class period. There will also be a comprehensive final exam. If you must miss an exam for religious or academic reasons, or in cases of illness or emergency, you must submit a written excuse. A makeup may be scheduled -- this will be decided on a case-by-case basis.

**Grading:** Quizzes constitute 10% of your final score. Each exam will be worth 14% of your final grade. The final exam is worth 20% of your grade.

Each exam, quiz, etc. will be curved separately and assigned a number grade between 0.0 (the lowest possible F) and 5.0 (the highest possible A). I will announce the cutoffs when returning the exam. If, for example, the cutoff for an A is 87 and the cutoff for a B is 71 and you get an 83, then the number grade corresponding to your 83 would be a 3.75 (B corresponds to 3.0 and you are 12/16=.75 of the way to the next cutoff). The homework and quizzes will be treated similarly. The total course grade may be curved further (that is, a 3.9 might result in an A or A- in the course), but the resulting curve will never lower your grade (that is, a 4.1 would always result in at least an A- in the course). +/- grades may be assigned in borderline cases. I reserve the right to assign a grade of “F” to any student who earns less than 50% on the final exam.
**Calculator:** (Required) TI-83 or TI-83 plus, or TI-84. Make sure to bring your calculator to class every day (calculators will be used on many quizzes and exams). You may not use a TI-89 or a TI-92.

**Important Dates (Exams are Tentatively Scheduled):**
- Monday, January 2014: Martin Luther King Jr. Holiday (no classes)
- Thursday, January 30: Exam I
- Monday, February 17: Exam II
- Monday, March 3 – Thursday, March 6: Spring Break (no classes)
- Tuesday, March 11: Exam III
- Tuesday, April 1: Exam IV
- Monday, April 14: Final date to withdraw
- Monday, April 21: Easter Holiday (no classes)
- Tuesday, April 22: Exam V
- Thursday, May 1: Last day of classes
- Monday, May 5: Study day
- Tuesday, May 6: Final exam 10:30-12:20

**Attendance:** Class attendance is crucial. Lectures include the introduction and explanation of new topics, explorations of proofs, and solutions of discrete mathematics problems. Class notes are to be used in conjunction with the text, in order to elicit a fuller understanding of discrete mathematics.

*Please be courteous and come to class on time!*

[http://catalog.xavier.edu/content.php?catoid=9&navoid=359#Class_Attendance](http://catalog.xavier.edu/content.php?catoid=9&navoid=359#Class_Attendance)

**Missed Classes:** If you must miss a class due to illness or an emergency, you must first get a copy of the notes from one of your classmates. (If you do not know anyone in the class, I will help you contact someone to get notes.) Review the missed notes, and write detailed questions as you are reading them. I will be happy to answer all of your questions (as many as you would like to ask!), but I cannot re-lecture for you. As noted above, quizzes cannot be made up.

**Getting Help:** One of the best resources for additional help is the Mathematics Tutoring Room, Hinkle 126. This room is staffed by mathematics tutors who are just WAITING to help someone! Hours of operation for this room will be posted. Please give our tutors something to do!!

**Group Work:** Working in a group can be beneficial for everyone involved, provided that you do not abuse the privilege. Make sure that everyone in your group is making a contribution. Do not copy answers from one another, as this will only backfire against you come test-time. Instead, let concepts gel after group discussion, and then write up the solutions by yourself.

**Academic Honesty:** You are expected to conduct yourself with integrity in this course. Cheating will be dealt with as harshly as University regulations permit;
measures will be taken during exams to prevent cheating. Students are directed to the undergraduate bulletin for further information.

**How to Do Well in this Course:** Come to class! Go to the tutoring room! Come visit me during office hours! Read the text! Try the problems! Smile! Study hard! Read your class notes! Make sure you keep up with the material in class! Review your class notes! Don’t Panic! **Enjoy!** Most important of all, if you feel that you are falling behind, or that you do not understand a certain topic, or if you would just like to discuss a mathematical idea (or anything else), come to visit me in my office. That’s why I am here! 😊