

Mathematics MAT 202 : Calculus II
Spring 2011
TR 11:30 am - 12:45 pm, Room 209

Instructor: Dr. Brad Emmons

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Course Materials

Calculus : Early Transcendental Functions, 6th Edition, Larson and Edwards

Introduction

Calculus is one of the major crowning achievements in 17th century mathematics. It is the branch of mathematics used to describe motion, and it has a multitude of applications in mathematics, the physical sciences, engineering, and the social and biological sciences. In this semester, we will concentrate on integral calculus. Goals include understanding the main concepts of integral calculus, and to be able to apply these concepts to a variety of applications. In addition, we will be exploring some basic integration techniques.

Exams

There will be two in-class exams as well as a final cumulative exam. The exams will test your understanding of statistical concepts, your ability to work through some of the computations, as well as your ability to apply the techniques to certain applications. The first exam is scheduled for Thursday, February 17, the second exam is scheduled for Thursday, March 31. The final exam will be held on Saturday, May 7, from 8:00 a.m. to 10:30 a.m. All exams will count for 25 percent of your final grade. There will be NO make-ups for missed exams. Please look over your schedule as soon as possible. If you see a potential conflict, inform me immediately.

Homework

The best way to learn Mathematics is to solve problems. At the end of each section, there are a variety of exercises that you can look at to help understand concepts and hone your skills. I will suggest problems for you to attempt from the end of the section, but I will not grade these. Instead, I will assign weekly problem sheets that will be collected and graded. These problems will be more in-depth than the drill-type activities and will require more exposition on your part. You will be graded on content, organization and completion of the assignments. In addition to the graded problems, each assignment will carry 5 completion points. To earn 5 out of 5 of the completion points, the assignment must be written up neatly and thoroughly with complete solutions to all of the assigned problems. Late homework will not be graded, but you may still earn completion points on late assignments. The homework is designed to help you identify where you might have difficulties. If you encounter any trouble with an assignment or a concept, seek help!

Attendance

Attendance in MAT 202 is extremely important. Although there is no official attendance policy, note that if you are not in class on a particular day, I will not grade your homework assignment. I will also require that you be in class at 11:30 a.m. and no later.

Grading

Your grade in this course will be based on two main factors: homework and exams. The exams will be worth 75% of your final grade and the homework 25%. In addition to these factors, minor ethereal factors such attendance, class participation, attitude, and improvement over the course of the semester can also affect your grade. To determine your final grade, 90–100% = A, 80–89% = B, 70–79% = C, 60–69% = D, 59 and below = F, with the top two percents receiving a + and the bottom two percents receiving a –.

Calculators

The use of calculators will not be allowed on any quizzes or exams. None of the work will require any sophisticated computations. You may use a calculator when working on your homework to check your

work. However, since will not be allowed to use it on the exam, I suggest you do as much work without your calculator as possible.

Important Dates

Thursday, February 17 – Exam I
Monday, March 14 - Friday, March 18 – NO CLASS
Thursday, March 31 – Exam II
Tuesday, May 3 – Last Day of Class
Saturday, May 7, 8:00 a.m. - 10:30 a.m. – Final Exam

Suggestions

Come to class with your homework assignment completed every day
Study for at least 30 minutes each day in addition to completing your homework assignment
Read the section we will be covering *before* we cover it in class
Do not fall behind!
Come to office hours to discuss homework and concepts. I am here to help!

Syllabus

MAT 202 : Calculus II

Term : Spring 2011

Week 1	January 20	Course Policies, Syllabus, Section 5.1
Week 2	January 25 January 27	Section 5.2 – Area Section 5.3 – Riemann Sums and Definite Integrals
Week 3	February 1 February 3	Section 5.3 – Riemann Sums and Definite Integrals Section 5.4 – The Fundamental Theorem of Calculus
Week 4	February 8 February 10	Section 5.4 – The Fundamental Theorem of Calculus Section 5.5 – Integration by Substitution
Week 5	February 15 February 17	Section 5.7 – The Natural Logarithm Exam I
Week 6	February 22 February 24	Section 5.8 – Inverse Trigonometric Functions Section 7.1 – Area of a Region Between Two Curves
Week 7	March 1 March 3	Section 7.2 – Volume : The Disk Method Section 7.3 – Volume : The Shell Method
Week 8	March 8 March 10	Section 7.3 – Volume : The Shell Method Section 7.4 – Arc Length and Surfaces of Revolution
Week 9	March 15 March 17	NO CLASS NO CLASS
Week 10	March 22 March 24	Section 7.5 – Work Section 7.5 – Work
Week 11	March 29 March 31	Section 8.1 – Basic Integration Rules Exam II
Week 12	April 5 April 7	Section 8.2 – Integration by Parts Section 8.2 – Integration by Parts
Week 13	April 12 April 14	Section 8.3 – Trigonometric Integrals Section 8.4 – Trigonometric Substitutions
Week 14	April 19 April 21	Section 8.5 – Partial Fractions Section 8.5 – Partial Fractions
Week 15	April 26 April 28	Section 8.6 – Integration by Tables Section 8.7 – Indeterminate Forms and L'Hopital's Rule
Week 16	May 3	Section 8.8 – Improper Integrals