Westfield State College

Department of Mathematics

Calculus II
Math 106
Fall 2007

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Office Hours: M 1:40-2:30, W 12:35-1:25,
Th 12:45-2:00, or stop by, or by arrangement.

Welcome! In Calculus II the primary emphasis is *integral* calculus and some of its applications. We will also study series and differential equations, very important topics in mathematics that have many applications. We will draw heavily on the knowledge we have gained from Calculus I. In order to help us gain a conceptual understanding of calculus we will employ algebraic, numeric, graphical and verbal (written) representations.

Text: *Calculus: Concepts & Contexts,* by James Stewart, Thomson, 3rd edition. (Note that this is **not** the new *Enhanced Edition* which Calc I now uses.)

Class Meetings: **TuTh** **7:50 – 9:30 AM** **Wilson 412**

Prerequisites: Working knowledge of Pre-calculus, Calculus I.

Aspects of the Course:

ATTENDANCE: Exploration, collaboration, and communication in class will be essential to be successful. Attendance, therefore, is mandatory and active participation contributes to your grade. No make-ups will be given for missed quizzes or exams, except in the event of a true, documented emergency where the instructor is notified **in advance**—if possible. In such a circumstance, it is the student's responsibility to contact the instructor to make alternate arrangements. Any unexcused absence above two will have adverse consequences on your grade.

READING GUIDE QUIZZES: As we begin each new section I will give you a short quiz based on the reading. You may use your Reading Guide and whatever notes you may have taken on the reading to help you.

HOMEWORK QUIZZES: Every Thursday there will be a quiz based on the homework. I will pick one of the homework problems assigned during the previous week and ask you to copy your solution for that problem from your notebook onto a separate piece of paper. These quizzes cannot be made up. I will drop the lowest quiz grade when computing your final average.

SOLUTIONS MANUAL: As a class we will create a Solutions Manual --located in the Mathematics Department Office-- which you will be able to use as a resource during the semester. For each homework problem that is assigned, one person will be required to provided a correct, coherent, neat, and detailed solution to this problem that will be placed in the Solutions Manual. These solutions are due within two class periods of when they are assigned. **These solutions must be brought to my office and checked before they are placed in the solutions manual.** Late solutions will not receive full credit.

LABS: In the laboratory component of the course, we will explore a number of projects in greater detail. Several of the activities will involve a more extensive write up, rather than just answering the questions. You will work on these activities in groups of three or four, and you should hand in one set of answers for the entire group.

WEBWORK: WebWork is an online system for assigning and grading homework problems that we will be using this semester. You will be assigned several problems based on the material we covered the previous week that will be will be due the following week. The specifics of this will be explained in class.

EXAMS: There will be three in-class exams during the semester as well as a cumulative final exam. Graphing Calculators will be allowed and are essential. There will be **no** make-ups given except in extenuating circumstances. Make-ups may be oral exams. The exams are tentatively set for late September, mid October, and mid November. The Final Exam will be Monday December 18, from 10:10 am – 12:10. **Going home early is NOT a valid reason for taking this exam before this date.** Please tell your parents and make your travel plans appropriately.

Grading Scheme & Further Grading Basis:

%	95-100	90-94	87-89	84-86	80-83	77-79	74-76	70-73	67-69	60-66	60-0
	A	A-	B+	B	B-	C+	C	C-	D+	D	F

Topics: For the sections listed below 5.1 denotes Chapter 5 Section 1.

TOPIC	SECTION
Introduction, Anti-derivatives, Areas and Distance	4.9, 5.1
The Definite Integral	5.2, 5.3
The Fundamental Theorem of Calculus and Substitution	5.4, 5.5
Exam 1	
Integration by Parts	5.6
More on Integration By Parts and Techniques of Integration	5.6, 5.7
More Techniques of Integration	5.7, 5.8
Improper Integrals and Applications of the Definite Integral	5.10, 6.2, 6.4
More Applications of the Definite Integral	6.2
Exam 2	
More Applications of the Definite Integral, and Sequences	6.3, 6.5, 8.1
Series	8.2
Test for Convergence	8.3, 8.4
More tests and Power Series	8.4, 8.5
Exam 3	
Power and Taylor Series	8.6, 8.7
Differential Equations	7.1, 7.2
More on Differential Equations	7.3, 7.4
Wrap up and Review	
Final Exam:	**December 18, 10:10—12:10**

GRADES: In general, course grades will be determined using the following percentages.

Exams	35%
Homework and Reading Quizzes/other Assignments	10%
Labs	10%
Solutions Manual	10%
WeBWorK Problems	10%
Attendance	5%
Final exam	20%

Best wishes for a successful semester!