Syllabus - Math 173 Section 2 Fall 2007

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Office Hours: Monday 11-12, Wednesday & Friday 10-11

Time: Monday 10:00-10:50, Tuesday & Thursday 10:00-11:15
Room: 302 Fitzelle Hall (Monday), 300 Fitzelle Hall (Tuesday & Thursday)
Text: James Stewart, Calculus, Early Transcendentals, 6^{th} edition, Brooks/Cole

Catalog Description: Math 173 and 174 constitute the first two-thirds of the standard 12-credit calculus sequence. Topics include functions and their graphs, limits, differentiation, integration, derivatives and integrals of the elementary functions, polar coordinates, parametric equation, and infinite series.

Goals: Learn to analyze the continuity and differentiability of basic functions of one variable. Develop an understanding of applications of the derivative to extreme value problems, monotonicity, concavity, the Mean Value Theorem, Newton's method and related techniques, related rates, and the Fundamental Theorem of Calculus.

Attributes: LA,CPA,M2

SUNY Learning Outcome: Students will show competence in the following quantitative reasoning skills: arithmetic, algebra geometry, data analysis, and quantitative reasoning.

Grading Policy: Your grade will be determined by the following:

- Three cumulative midterm exams, each worth 15% of your grade. Tentative dates for these are:
  - Exam 1: Monday, 24 September
  - Exam 2: Monday, 22 October
  - Exam 2: Monday, 12 November
- Homework, assigned weekly and worth a total of 20% of your grade.
- The final exam, cumulative and worth 35% of your grade.

Your final grade will be determined from the numerical grade x above according to the following scheme:

A	$92 \leq x \leq 100$	B^-	$82 \leq x < 80$	D^+	$67 \leq x < 70$
A^-	$90 \leq x < 92$	C^+	$77 \leq x < 80$	D	$62 \leq x < 67$
B^+	$87 \leq x < 90$	C	$72 \leq x < 77$	D^-	$60 \leq x < 62$
B	$87 \leq x < 82$	C^-	$70 \leq x < 72$	E	$0 \leq x < 60$

Course Outline: We will cover the first four chapter of the text, in their entirety. The main themes of each chapter are as follows:

Chapter 1 Functions and Models: Ways to represent a function, basic functions (algebraic and transcendental).

Chapter 2 Limits and Derivatives: This is the theoretical core of the course. Topics include limits, continuity, and derivatives.

Chapter 3 Differentiation Rules: Derivatives of basic function, the product and quotient rules, chain rule, implicit differentiation, and some applications to problems (*e.g.*, related rates and linear approximations).

Chapter 4 Applications of Differentiation: Analyzing functions with differential techniques (*e.g.*, extreme values of functions), the Mean Value Theorem, optimization problems, Newton's method, antiderivatives.

Calculators: You are allowed to use a calculator on all homework and exams. You may use *only your own* calculator on exams.

Attendance: Please come to class regularly and on time. Any material missed due to an unexcused absence is the responsibility of the student.

Students missing 25% or more of class, any time from the second week of class up until the last day to withdraw from an individual course may be removed from the course by the instructor.