

STEVENS INSTITUTE OF TECHNOLOGY
STEVENS TECHNICAL ENRICHMENT PROGRAM
BRIDGE COMPONENT

SYLLABUS: CALCULUS

Part I: Summer 2011 (June 27th - July 8th) – Instructor: Dragos Bozdog
Part II: Summer 2011 (July 11th - August 5th) – Instructor: Varoujan Mazmanian

Part I: Summer 2011 (June 27th - July 8th)

Instructor: Dragos Bozdog
Kidde 105 (Dept. of Mathematical Sciences)
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Email: Dragos.Bozdog@Stevens.Edu

Time: Mon, Tue, Wed, and Thu (1:30pm-3:30pm)

Textbook: *Stewart, James, Calculus: Concepts and Contexts*, 4th Edition, Brooks/Cole Pub., 2008.

Objective: An introduction to differential and integral calculus for functions of one variable. The differential calculus includes limits, continuity, the definition of the derivative, rules for differentiation, and applications to curve sketching, optimization, and elementary initial value problems. The integral calculus includes the definition of the definite integral, the Fundamental Theorem of Calculus, techniques for finding antiderivatives, and applications of the definite integral. Transcendental and inverse functions are included throughout.

Attendance: A record of attendance will be kept and absences will decrease your grade.

Course program:

Date	Topic	Book Sections	Homework/Tests
Mon, June 27 th	-	-	Diagnostic Test
Tue, June 28 th	Functions and Models	Chapter 1: 1.1-1.6	Hw 1 – due Wed, June 29 th
Wed, June 29 th	Parametric Curves Limits	Chapter 1: 1.7 Chapter 2: 2.2-2.5	Hw 2 – due Thu, June 30 th
Thu, June 30 th	Derivatives	Chapter 2: 2.6-2.8	Hw 3 – due Tue July 5 th
Mon, July 4 th	-	No class	-
Tue, July 5 th	Polynomial and Exponential Derivatives Product and Quotient Rule Trigonometric Functions Derivatives	Chapter 3: 3.1-3.3	Hw 4 – due July 6 th
Wed, July 6 th	Chain Rule, Implicit Differentiation	Chapter 3: 3.4-3.5	Hw 5 – due Thu, July 7 th
Thu, July 7 th	Inverse Trigonometric and Logarithmic Derivatives	Chapter 3: 3.6-3.7	Hw 6 – due Mon, July 11 th
Mon, July 11 th	-	-	Test 1

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Schedule to be determined.