

**MATH 112**  
Call/Sec. 08451/003

**Calculus for Business & Economics**

**Fall 2009**  
3 Credit hours

**Lecture:** 9:25–10:40am Monday & Wednesday, Room: Columbine Hall 317.

**Instructor:** Dr. S. Son <http://www.uccs.edu/sson> E-mail: [sson@uccs.edu](mailto:sson@uccs.edu)  
Office: Engr 282 Phone: [719] 255-3515 Fax: [719] 255-3605

**Office hours :** 10:45–11:45am MW, or by appointment

**Prerequisite:** Math 104 or score 17 or more on algebra diagnostic exam.

**Text:** Calculus and Its Applications, 9/E, Bittinger/Ellenbogen,  
ISBN(13) 0321395344 (978-0321395344) Addison Wesley (2007)

**Description:** Calculus for the business and economics students.

**Important Dates:**

Aug. 24 First day  
Sept. 7–8 Labor Day: No classes  
Sept. 10 Last day to register/Final day for 100% Drop Refund  
Nov. 25–29 Thanksgiving: No classes  
Dec. 2 10:20–10:40am: Instructor Evaluation (FCQ)  
Dec. 9 Lecture ends

**Exams:** There will be two 75-minute-exams and a comprehensive final exam.

Exam 1 9:25–10:40am, Oct. 5 (Mon.)  
Exam 2 9:25–10:40am, Nov. 4 (Wed.)  
Final Exam 8:00–10:30am, Dec. 16 (Wed.)

**There will be NO makeup exam** unless arrangements have been made prior to Sept. 11. A missed exam will be counted as a score of **zero** point toward your course grade.

**Grade : 100%**

10%: Homework  
90%: Exams : 30%/each exam  
A: 93–100 A–: 90–92.9 B+: 87–89.9 B: 83–86.9 B–: 80–82.9 C+: 77–79.9  
C: 73–76.9 C–: 70–72.9 D+: 67–69.9 D: 63–66.9 D–: 60–62.9 F: below 60%

If the mean/median/average is abnormally low, I may curve the grade.

**Drop:** Please seek counseling from the Dean's office before dropping *any* course.

Important dates:

**Sept. 10** – last day to drop and receive a 100% tuition refund.

**Oct. 30** – last day to drop without special permission from your Dean.

**Disability Statement:** If you have a disability for which you are requesting an accommodation, you are encouraged to contact Disability Services within the first week of classes. Contact information: Main Hall, room 105, 255-3354.

- 8/24 Overview
- 8/26 Review 1
- 8/31 Review 2
- 9/2 Quiz on Prerequisites
- 9/9 1.1 Limits- Numerically and Graphically, #8,9,10,11,12
- 9/14 1.2 Limits Algebraically, #14,15,16,17,18
- 9/16 1.3 Average rates of change # 1a,b,2a,b,3; 1.4. derivative using limit definition
- 9/21 1.5 Power, Sum, Difference, #1,2,3,4,5
- 9/23 1.6 Product, Quotient Rules, #1,2,3,4,5
- 9/28 1.7 Chain Rule, #1,2,3,4,5
- 9/30 1.8 Higher-Order Derivatives, #1,2,3,4,5
- \*10/5 Test 1- Chapters 1
- 10/7 2.1 Maximization and Minimization with 1st derivative, #1,2,3,4,5
- 10/12 2.2 Maximization and Minimization with 2nd derivative, #1,2,3,4,5
- 10/14 2.4 Absolute Maximum and Minimum, #2,4,5,8,16; 2.5 Applications
- 10/19 2.6 Differentials, #1a,b,c,d,2a
- 10/21 2.7 Implicit Differentiation and Related Rates, #1,2,3,4,5
- 10/26 3.1 Exponentials, #11,12,13,14; 3.2 Logarithms
- 10/28 3.3 Growth #1,2,3,4,5; 3.4 Decay
- 11/2 3.5 Derivatives of Exponentials and Logarithms, #1,2,3,4,5
- \*11/4 Test 2- Chapters 2 and 3
- 11/9 4.1 Areas, #1,2,3,4,5
- 11/11 4.2 Antiderivatives, #1,2,3,4,5
- 11/16 4.3 Definite Integrals, #1,2,3,4,5; 4.4 Properties
- 11/18 4.5 Substitution, #1,2,3,4,5; 4.7 Tables
- 11/23 6.1 Functions of Several Variables; 6.2 Partial derivatives, #1,2,3,4,5
- 11/30 6.3 Multivariate Optimization, #1,2,3,4,5
- 12/2 6.3 Maximum/Minimum, #22,23,24,25,31
- 12/7 Review I
- 12/9 Review II
- \*12/16 Comprehensive Final Exam