

# Math 105 Section 07 Elements of Calculus I

**TIME and PLACE:** M,W,F 12:50-1:40 in DeBartolo 138

**INSTRUCTOR:** Dr. Chris Bendel

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**OFFICE HOURS:** Mon 11-12, Wed 10-11, Fri 11-12, and BY APPOINTMENT

**HOMEWORK:** Homework problems will be assigned for each section we cover and will be due on Mondays in class as listed on the schedule below. Late homework will be accepted only in an emergency. To get full credit for homework, you must show all work necessary for each problem.

## **ADDITIONAL COMMENTS:**

Calculators will **NOT** be allowed on any of the exams. However, you are encouraged to use them on homework problems when appropriate.

The location of exams will be announced in class and put on my webpage when they become known.

## **TENTATIVE SCHEDULE AND HOMEWORK PROBLEMS:**

8/27 - Introduction, Review: 0.1 - 1,3,9,13,17,21,23-34,37,40-42,53;  
0.2 - 1,6,7,10,15,20-23,27,33-37; 0.3 - 1-7,15,17,19,23-35 odd;  
8/29 - Review: 0.4 - 1,5,7,13,15,17,23,25,27,29,33,37;  
0.5 - 1-4, 12,13,14,19,21,25,29,33,37,43,50,51,67,71,85,87  
9/1 - **NO homework due**, Review: 0.6 - 1,5,7,8,13,15,21,25,33-36,41-44;  
1.1 - 1,3,5,9,11,17,21,25,27,31,35,41,44,46,47,51  
9/3 - Slope of a curve: 1.2 - 1,3,7,10,13-17,23,25,27,29  
9/5 - The derivative: 1.3 - 1-9 odd,13,15,17,21,27,35,37,41,47,49,51  
9/8 - **Homework for sections 1.2,1.3 due**  
Limits: 1.4 - 1-11 odd,15,17,21,23,25,47,51  
9/10 - Limits and derivatives: 1.4 - 29,33,35,41,43,45  
9/12 - Continuity: 1.5 - 1,2,3,5,7,8,9,11,15,17,19,21  
9/15 - **Homework for sections 1.4,1.5 due**  
Differentiation Rules: 1.6 - 1,3,5,9,13,17,21,23,25,31,35,43,47,49  
9/17 - Review for Exam 1  
9/18 - **EXAM 1 - 8:00-9:00 in TBA**  
9/19 - Go over Exam 1  
9/22 - **Homework for section 1.6 due**  
More derivatives: 1.7 - 5,7,11,13,19,21,27,31,33  
9/24 - Rates of change: 1.8 - 1,5,7,11,13,15a,c,19,23,27,31,33,35,39  
9/26 - Graphs of functions: 2.1 - 1-11 odd,15,17,23,27,31,39  
9/29 - **Homework for sections 1.7,1.8,2.1 due**

1st and 2nd derivative tests: 2.2 - 1,3,5,9,11,13,17-27 odd,37,39,45  
 10/1 - Curve sketching: 2.3 - 1,5,9,13,17,21,25,29,33,35,37  
 10/3 - More curve sketching: 2.4 - 1,7,11,19,23,29,31  
 10/6 - **Homework for sections 2.2-2.4 due**  
     Optimization: 2.5 - 1-11 odd,15,17,21  
 10/8 - More Optimization: 2.6 - 1,3,5,7,11,15  
 10/10 - More Optimization: 2.6 - 17-21 odd  
 10/13 - **Homework for sections 2.5,2.6 due**  
     Product and quotient rules: 3.1 - 1,5,9,11,15,17,21,27,33,48,49,51  
 10/15 - Review for Exam II  
 10/16 - **EXAM II - 8:00-9:00 in TBA**  
 10/17 - Go over Exam II  
 10/18 - 10/26 - **FALL BREAK**  
 10/27 - **Homework for section 3.1 due**  
     Chain Rule: 3.2 - 1,5-13 odd,17,21,29,32,33,35  
 10/29 - Implicit Differentiation, Related Rates: 3.3 - 1,3,5,9,23,39,31,33,39,41,45  
 10/31 - **Happy Halloween!** - Exponential functions: 4.1 - 1,5,11,17,21,25,31,35  
 11/3 - **Homework for sections 3.2,3.3,4.1 due**  
     The natural exponential function: 4.2 - 1,3,5,7,11,15,19,21,23,25,27  
 11/5 - Differentiation: 4.3 - 1,3,5,7,11,15,19,21,29,31,37,43,45,51  
 11/7 - Logarithmic functions: 4.4 - 1-13 odd,17,27,31,33,37  
 11/10 - **Homework for sections 4.2-4.4 due**  
     Differentiation: 4.5 - 1,3,7,11,17,19,21,23,33  
 11/12 - Properties: 4.6 - 1,3,5,14,15,19,23,29,33  
 11/14 - Exponential growth: 5.1 - 1,3,7,9,11,15,17,19,21,25,29,33  
 11/17 - **Homework for sections 4.5,4.6,5.1 due**  
     Compound interest: 5.2 - 1,5,9,11,13,15,21,25  
 11/19 - Review for Exam III  
 11/20 - **EXAM III - 8:00-9:00 in TBA**  
 11/21 - Go over Exam III  
 11/24 - **Homework for section 5.2 due**  
     Antidifferentiation: 6.1 -  
 1,3,5,7,11,15,17,23,25,27,31,33,37,39,41,45,47,49  
 11/26 - Areas and Definite integrals: 6.2 - 5,9,13,17,21  
 11/27 - 11/30 - **Thanksgiving Break**  
 12/1 - **Homework for sections 6.1,6.2 due**  
     FTC: 6.3 - 1,3,5,7,13,19,25,29,33,35,37,41,43,47  
 12/3 - Trig functions: 8.1 - 1,7,9,11,13; 8.2 - 1,3,7,11,13,21,27,33,35,36,37  
 12/5 - Differentiation: 8.3 - 1,5,9,11,13,15,17,21,25,27,35,37  
 12/8 - **Homework for sections 6.3,8.1-8.3 due, Review**  
 12/10 - **Last Day of Class, Review**  
 12/16 - **FINAL EXAM - 1:45-3:45 in TBA**