

MATH -U122

Calculus for Management & Social Sciences

Summer-I 2016
ONLINE Course

Instructor: Dr. M. Hameed
Contact: 864-503-5371, mhameed@uscupstate.edu

☞ **Very Important:** As you know this is an online class. Things will go differently than a regular course. Please read this syllabus very carefully to understand the course layout.

☞ **Required Text:** *Calculus: An Applied Approach, (8th Edition)* by Larson and Edwards; Published by **Houghton Mifflin**
Selected Problems will be assigned from the book. Your test questions will be similar to HW problems in concept. Therefore access to a book is very important.

☞ **Grading Policy:** Final grade in this course will be determined as follows:
Two Midterm Tests (100 points + 100 points), Quiz (100 points),
Accumulative Final (200 points) (Total 500 Points)

Your final letter grade will be based on the following percentage Scale:

A	90-100		B	80-86	C	70-76	D	60-66
B+	87-89		C+	77-79	D+	67-69	F	0-59

This curve may be adjusted at the end of the semester.

Homework & Quiz:

Homework Problems

will be assigned regularly from every section covered. Please practice all the problems. You are NOT required you to submit HWs, But I will quiz you from each section, and questions in the quiz will be very similar in concept to HW problems.

Quiz

We will have 15 Quizzes total, approximately 3 to 4 every week. You will need to complete each quiz online in Blackboard. Quizzes will carry a substantial weight towards to your final grade. Just to give you an idea, all Quizzes will be equal to one midterm test in weight. So please take them very seriously.

☞ **Exams:** There will be two midterm exams during the semester and one final exam.

Midterm -1	June 11, 2015
Midterm -2	June 23, 2015
Final Exam	July 1, 2015

Midterm and final exam questions will be very similar in concept to these homework problems. Therefore, it is vital that you attempt HW problems and take the Quiz.

☞ **Exam Delivery:** All exams will be **online in Blackboard**, it will be your responsibility to complete your exam within assigned time frame.

☞ **Each exam will have two parts** explained below;

Multiple-Choice-Part: You will complete it electronically on Blackboard. Just select the correct answer, you might need to do some work to reach at the correct choice, but you don't need to show any work. This part of the test will be graded automatically and you will know your score as soon as you submit.

Show-Your -Work-Part: This part of the test will require you to solve given problems by hand on paper, **you MUST show all steps.**

☞ **Lecture Slides & Video Lectures:** For each section, I will provide complete study material. Power point slides and my own recorded video lectures will be uploaded to USC Upstate Blackboard. In video lectures, I will explain important concepts. Students should download lectures slides and must watch video lectures to understand the course material completely.

☞ **Blackboard Discussion Board:** I will keep an active discussion board via Blackboard. Please feel free to express your thoughts on the course material. You can also ask questions, about the material in slides, video lectures and most importantly about HWs. I will regularly respond to your questions, concerns and suggestions.

☞ **Disability Related Accommodations:** In accordance with University policy, any student with a disability who requests academic accommodations should contact Disability Services at 503-5199 to arrange an appointment with a Disability Services staff member

COURSE OUTLINE (HW Assignments will be announced every week)

	SECTION	TOPIC
	CH 1	LIMITS AND CONTINUITY
1	1.5	Concept of Limit, Properties, Techniques for Evaluating Limits
2	1.6	Continuity of functions
	CH 2	DIFFERENTIATION
4	2.1	Slope of a graph, Tangent to the line, Slope and Limit
5	2.2	Rules of Differentiation
6	2.3	Rate of Change and its Applications
7	2.4	Product and Quotient Rules
8	2.5	Chain Rule, General Power Rule
9	2.6	Higher Order Derivatives
10	2.7	Implicit Differentiation & its applications
11	2.8	Related Rates, Solving Real World Problems
	CH 3	APPLICATIONS OF DERIVATIVES
12	3.1	Increasing Decreasing Functions, critical Numbers
13	3.2	Extrema and the First Derivative Test
14	3.3	Concavity and Second Derivative Test
15	3.4	Optimization Problems
16	3.5	Business and Economics Applications of Optimization
17	3.6	Asymptotes and Infinite Limits
18	3.7	Sketching and Analyzing Curves
19	3.8	Differentials and Marginal Analysis
	CH 4	Derivatives of Exponential Functions
20	4.1	Exponential Functions
21	4.2	Natural Exponential Functions and their Applications
22	4.3	Derivatives of Exponential Functions
23	4.4	<i>Logarithmic</i> Functions, Solving Log. & Exp. Equations
24	4.5	Derivatives of Logarithmic functions
25	4.6	Exponential Growth & Decay in Real Life Situations
	CH 5	INTEGRATION & ITS APPLICATION
26	5.1	Antiderivatives & Indefinite Integrals
27	5.2	Integration techniques
28	5.3	Exponential & Logarithmic Integrals
29	5.4	Area & The Fundamental Theorem Of Calculus