

MAT 118 Calculus for Business and Social Science

Spring 2015

MW 3:30-5:55 pm

INSTRUCTOR: Charlie Lincoln

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OFFICE HOURS: To be announced.

REQUIRED TEXT: Applied Calculus, 6e Hybrid, by Berresford and Rockett

RECOMMENDED TEXT: Student Solutions Manual, 6e, by Berresford,

COUSE DESCRIPTION: This is a calculus course for students who intend on majoring in business, social science, or for students who have a general interest in calculus and its application. Topics covered include functions, limits, differentiation, integration, and partial derivatives.

PREREQUISITE: A grade of C or better in Math 154A, Math 154AA, or equivalent; or a satisfactory score on Mathematics Assessment Test.

ONLINE HOMEWORK ASSIGNMENTS: (for [WebAssign](#)): **Itcc 6612 7466**

WebAssign is required for this course and a software license is required. You must have a valid e-mail address to use the on-line curriculum. Students have *two choices*. The *first choice* is to purchase the textbook from the bookstore. The textbook comes with the software license. Note: If you purchase a used textbook, it may not have a valid course access code. Be VERY careful when acquiring the text. The *second choice* is to purchase the WebAssign license alone either from the bookstore or online at [coursecompass.com](#). The license gives you access to the textbook online. This is a more economical choice, but is only recommended to students who have online access and feel comfortable reading a computer screen instead of a traditional book. To access our class page, go to <https://www.webassign.net> and register using your student access code and the course ID for this class: **Itcc 6612 7466**

CALCULATOR: I recommend a TI-89 graphing calculator for this course. You can rent them from the library.

STUDENT LEARNING OUTCOMES:

1. Evaluate limits, derivatives, and integrals for both single variable and multivariable functions.
2. Apply the integral and derivative to analyze functions that arise from business and social science applications.
3. Solve differential equations that arise from business and social science applications.
4. Apply analytic geometry to analyze curves and surfaces.

GRADING POLICY: Method of Student Evaluation

Homework (18 sections at 5 points each)	90 points
Quizzes (4 at 25 points each)	100 points
Exams (2 at 100 points each)	200 points
Final (Covers entire course content)	150 points

Your letter grade will be based on your percentage of the 540 possible points.

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	less than 60%

CHECKING YOUR GRADE ONLINE:

We will use Passport to check your grades online.

HOMEWORK: For Homework, you must show your work to get credit. Homework will be accepted late for reduced credit. You can turn in your homework early if you know you are going to miss the class. Feel free to consult a fellow classmate, a tutor, your instructor, or anyone else for assistance on the homework

EXAM POLICY: Grading will be based on progress towards the final answer, and the demonstration of understanding of the concept that is being tested. The more you show me with steps and detail, the better your chances for partial credit. You provide me the communication and detail in your answers; and I will give you the best grade I can based on that communication and answer.

MAKE-UP POLICY: For Quizzes, Exams, and the Final, make-up is possible if the instructor is contacted in advance. There will be 5 quizzes but the one with the lowest score will be dropped. The make-up test needs to be taken before the next class. If you take the make-up test at TLC, you need to make an appointment at TLC 24 hours ahead by going to TLC, call (530)541-4660 x 740, or e-mail TLCProctors@ltcc.edu.

COMMUNICATION POLICY: You can communicate with me either by coming to class or office hours, sending an e-mail, or calling on the phone. I will respond to your e-mails in a timely manner, and I will do my best to return your calls (you need to make sure to leave your number clearly). If you miss the class, it is your responsibility to pick up the class handouts or obtain the information either from your classmates or from me during the office hours.

I have students work together to help each other. Please feel free to ask me directly if you like to work with me one-on-one. Please come see me if you do not understand my policies.

LEARNING DISABILITIES:

If you have a learning disability, be sure to discuss your special needs with me during the first week of class. Learning disabilities will be accommodated.

TUTORING:

Tutoring is available in the Math Success Center (MSC) in Room A201.

HOW TO SUCCEED IN A MATH CLASS:

- 1) Read your textbook before class.
- 2) Choose to attend all class periods and be on time.
- 3) Exchange names and phone number with classmates.
- 4) Learn from your mistakes and be patient with yourself.
- 5) Don't be afraid of asking questions.
- 6) Know how to get help if you need it.
- 7) Organize your class materials.
- 8) Do your homework.
- 9) Check your work.
- 10) Hand in assignments on time.

ACADEMIC DISHONESTY (CHEATING): Academic dishonesty of any form will not be tolerated. Students caught cheating on exams or quizzes will receive a score of zero on the assignment for the first offense and a course grade of F for the second offense.

Cheating will be defined as but not limited to: (1) using any method to copy another's work on an exam, quiz, or final (2) directly copying another student's homework assignment (3) using any method other than your own honest efforts to complete exams, quizzes, the final, or homework assignments.

The following activities are NOT cheating: (1) collaborating with other students to complete homework assignments (2) working with math tutors or academic coaches to complete homework assignments (3) working with other students to study for exams, quizzes or the final.

Tentative Lecture Schedule for Math 118

Be sure to use class time, office hours, and the MSC to get all of your questions answered.

For your homework, make sure you separate each section on the different pages and separate each problem on the different lines.

<u>Date</u>	<u>Section</u>	<u>Topic</u>
M 4/6	1.3 1.4	Introductions, Discussion of Syllabus Functions
W 4/8	2.1, 2.2	Limits and Continuity Rates of Changes, Slopes, and Derivatives Turn in Homework #1 (Sections 1.3-1.4)
M 4/13	2.2 2.3	Finish Section 2.2 Some Differentiation Formulas Turn in Homework #2 (Sections 2.1)
W 4/15	2.4, 2.5	Quiz 1 (Sections 1.3-2.2) The Product and Quotient Rules Higher-Order Derivatives Turn in Homework #3 (Sections 2.2-2.3)
M 4/20	2.6	The Chain Rule and the Generalized Power Rule Review for Exam 1 Turn in Homework #4 (Sections 2.4-2.5)
W 4/22		Exam 1 (Section 2.1~2.6)
M 4/27	2.7 3.1	Non-differentiable Functions Graphing Using the First Derivative Turn in Homework #5 (Sections 2.6)
W 4/29	3.2, 3.3	Graphing using the First and Second Derivatives Optimization Turn in Homework #6 (Sections 2.7, 3.1)
M 5/4	3.4 3.5	Further Applications of Optimization Optimizing Lot Size and Harvest Size Turn in Homework #7 (Sections 3.2-3.3)
W 5/6	4.1	Quiz 2 (Sections 2.7-3.3) Exponential Functions

<u>Date</u>	<u>Section</u>	<u>Topic</u>	<u>Homework on WebAssign</u>
	4.2	Logarithmic Functions	Turn in Homework #8 (Sections 3.4-3.5)
M 5/11	4.3,	Differentiation of Logarithmic and Exponential Functions	
		Review for Exam 2	Turn in Homework #9 (Sections 4.1-4.2)
W 5/13		Exam 2 (Section 3.1~3.5 & 4.1~4.3)	
M 5/18	4.4	Two applications for Economics: Relative Rates and Elasticity of Demands	Turn in Homework #10 (Sections 4.3)
W 5/20	5.1	Anti-derivatives and Indefinite Integrals	Turn in Homework #11 (Section 4.4)
M 5/25		Memorial Day Holiday	
W 5/27	5.2 5.3	Integration Using Logarithmic and Exponential Functions Definite Integrals and Area	Turn in Homework #12 (Section 5.1)
M 6/1		Quiz 3 (Sections 4.4-5.1)	
	5.5	Two Applications to Economics: Consumer's Surplus and Income Distribution	Turn in Homework #13 & #14 (Section 5.2, 5.3)
W 6/3	7.1	Functions of Several variables	Turn in Homework #15 (Sections 5.5)
M 6/8	7.2	Partial Derivatives	Turn in Homework #16 (Sections 7.1)
W 6/10		Quiz 4 (Sections 5.2, 5.3, 5.5)	
	7.3	Optimizing Functions of Several Variables	Turn in Homework #17 (Sections 7.2)
M 6/15	7.3	Finish Section 7.3	
W 6/17		Quiz 5 (Section 7.1~7.3)	
		Review for Final	Turn in Homework #18 (Sections 7.3)
M 6/22		Cumulative Final Exam	