

Syllabus Math 122-J10 Calculus for Business Administration and Social Sciences

Instructor: Jack R Dalton

CRN: 70242

Section: J10

Class Meetings: Web Synchronous MTWR 8:30-10:10 on Blackboard Collaborate Ultra

Email: jrdalton@math.sc.edu

Office Hours: MTW 11-12 on BB
or by Appointment

COURSE DESCRIPTION AND OBJECTIVES

Prerequisites: C or better in MATH 111/111I, or by placement through Algebra version of the Mathematics Placement Test.

Welcome to Math 122! The registrar's office lists the description of the course as: "Derivatives and integrals of elementary algebraic, exponential, and logarithmic functions. Maxima, minima, rate of change, motion, work, area under a curve, and volume."

Learning Outcomes: *Upon successful completion of this course, students will be able to:*

- Recall basic mathematical terms related to elementary algebraic, exponential, and logarithmic functions, and derivatives and integrals of such functions and express these terms in correct context.
- Apply the methods of calculus to solve applications involving maxima, minima, rates of change, motion, work and area under a curve.
- Verbally interpret data given as graphs, tables, and equations and put into words the relationship between a function and its derivative or integral given in these forms as well.
- Utilize a graphing calculator to solve problems, locate maxima and minima of a function and analyze change in a function.

REQUIRED MATERIALS

- **Textbook:** *Applied Calculus* 6th Edition Hughes-Hallet, Leason, Lock, Flath, et. al. **YOU DO NOT NEED TO BUY THE BOOK BUT YOU MUST BUY ACCESS TO THE ONLINE HOMEWORK!!**
- **Online Homework:** You will also need an access code for WileyPLUS, the online homework software. Access to WileyPLUS is REQUIRED for this course. However, since the online system comes with an eBook, the textbook itself is optional. If you choose not to purchase the bookstore package, then you can purchase access online.
- **Calculator:** A graphing calculator is required for this course. The TI-83 or 84 is highly recommended. A TI-89, TI-Nspire CAS, or similar calculator with a computer algebra system is not allowed on exams or quizzes.
- **Laptop/Computer With Microphone AND Camera.** You are required to have both working for all quizzes and exams, and expected to have both working for each class period. If your microphone is not working, try calling in with a phone.

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COURSE POLICIES AND EXPECTATIONS

Design: This class meets four times a week for lecture online via Blackboard Collaborate for 100 minutes each. Most classes will be split into two parts: group problem solving/presentation and lecture. It is **very** important that you study outside of class every day. This amounts to reading the book, doing the homework, watching youtube, and studying for quizzes and exams.

Participation: Participants are expected to attend EVERY online class meeting and to get involved in the discussion. We will learn much more if we explore the mathematics together. All participants are expected to show respect to other students, the instructor, and any guests who may be visiting the class during the year (Golden Rule). If you feel like zoning out and not paying attention, that is fine, however, any behavior that negatively affects the learning of your classmates WILL NOT BE TOLERATED. I have no problem kicking a student out for being disruptive. Out-of-class participation is also encouraged, so get to know the other students in class; exchange phone numbers; work together on homework assignments; and give each other moral support.

Attendance: Attendance is expected and will be taken daily. You are also expected to be punctual. 3 lates will result in one absence. Absence from more than 3 class periods WILL result in the reduction of one letter grade. For excused absences, proper documentation is required before the absence. Your attendance may also be considered in borderline grade cases.

Academic Integrity: I expect you to familiarize yourself with the Honor Code found in the current student handbook. Keep in mind that “Any student who violates this Honor Code or who knowingly assists another to violate this Honor Code shall be subject to discipline.” Honor Code:
https://sc.edu/about/offices_and_divisions/student_conduct_and_academic_integrity/index.php

Students with Disabilities: Students who would like to request accommodations for disabilities must talk to me as soon as possible. Students must register with the Office of Student Disability Services before I can make any accommodations.

Make-Up Policy: Exams and quizzes can be made up **ONLY** in the case of an emergency. It is your responsibility to contact me within a reasonable time to request a make-up exam.

If your excuse is a non-emergency, you may take the quiz/exam late with a 50% point penalty.

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Homework (VITAL FOR THIS CLASS!!): Homework will be assigned on a regular basis, and due regularly. All assignments will be completed online in WileyPLUS. You will be provided with multiple attempts and problem solving resources on the problems. However, keep in mind that these resources will not be available on quizzes and tests. It is your responsibility to work through the homework problems in their entirety in order to gain mastery of the material. Students are encouraged to work together on homework, but each student must personally submit his or her own solutions in WileyPLUS.

Each of you will also be required to present two worked-out solutions to homework problems during the semester, recorded and uploaded to blackboard. The idea of these is that you will learn more by trying to explain your work to someone else than you would otherwise. I recommend recording yourself with a cell phone, having a friend record you, or doing a screen record with a tablet. Each video should be less than 5 minutes.

Quizzes: Quizzes will be weekly, online, and will cover the previous week's material. Quizzes will be taken through the Respondus Lockdown Browser with Monitor. No quizzes will be dropped BUT quiz rewrites will be allowed to recover half the lost points by meeting with the instructor during office hours to go over the questions that you got wrong. You will need to explain **why** the correct answer is what it is. Telling me the correct answer or emailing a photo of worked out problems **will not count**.

Exams: There will be three exams, whose dates will be announced in class at least one week in advance. Calculators will be allowed on exams. Before each exam we will have a review session to help support your understanding. Exams will be taken through the Respondus Lockdown Browser with Monitor. No exams will be dropped BUT exam rewrites will be allowed to recover half the lost points. See the above policy about quiz corrections for more details.

Final Exam: The final exam is cumulative. Final Exam, Friday, June 17 from 9 AM to 11:30 AM.

Mark your calendars now and make sure you can take the final exam on:

June 17, Friday – 09:00 a.m. To 11:30 a.m. (On Blackboard)

EVALUATION

Homework	15%
Quizzes	15%
Exams (3 at 10% each)	30%
Attendance/Participation	15%
Cumulative Final	25%

Final Grades will use the following scale

A	B+	B	C+	C	D+	D	F
[90, ∞)	[87, 90)	[80, 87)	[77, 80)	[70, 77)	[67, 70)	[60, 67)	$(-\infty, 60)$

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Important Dates:

- 05/10/2022 Last day for students to DROP without a grade of “W,” or Change Credit/Audit.
- 06/06/2022 Last day for students to DROP or withdraw without a grade of “WF”.
- 06/16/2022 Last day of class.
- ***Schedule below is tentative and subject to change***

Monday May 9, 2022	1	Intro to Course, 1.1 Functions & 1.2 Linear Functions
Tuesday May 10, 2022	2	1.3 Rates of Change
Wednesday May 11, 2022	3	1.4 Applications of Functions to Economics & 1.5 Exp. Functions
Thursday May 12, 2022	4	1.6 The Natural Logarithm & Quiz 1
Monday May 16, 2022	5	1.7 Exp. Growth & Decay & 1.8 Func. Trans. 1.9 Pow. Func.s, Prop.
Tuesday May 17, 2022	6	Review
Wednesday May 18, 2022	7	Review & Exam 1
Thursday May 19, 2022	8	2.1 Instant. Rates of Change 2.2 The Derivative Function
Monday May 23, 2022	9	2.3 Interpretations of the Derivative & 2.4 The Second Derivative
Tuesday May 24, 2022	10	2.5 Marginal Cost and Revenue & 3.1 Power Rule
Wednesday May 25, 2022	11	3.2 Derivs of Logs & Exps & 3.3 Chain Rule 3.4 Prod. & Quot. Rls
Thursday May 26, 2022	12	4.1 Local Maxima & Minima & 4.2 Inflection Points
Monday May 30, 2022	No Class	Memorial Day
Tuesday May 31, 2022	13	4.3 Global Max's & Min's 4.4 Profit, Loss and Revenue & Review
Wednesday June 1, 2022	14	Review and Exam 2
Thursday June 2, 2022	15	5.1 Distance & Accumulated Change
Monday June 6, 2022	16	5.2 The Definite Integral & 5.3 Area
Tuesday June 7, 2022	17	5.4 Interpretations of the Def. Integral & 5.5 Fund. Theorem of Calc
Wednesday June 8, 2022	18	6.1 Antiderivatives
Thursday June 9, 2022	19	6.2 Antideriv's & Indef. Integrals 6.3 Using FTC to Compute Int's
Monday June 13, 2022	20	6.6 Integration by Substitution & Review
Tuesday June 14, 2022	21	Review & Exam 3
Wednesday June 15, 2022	22	5.6 Average Value & 6.4 Consumer and Producer Surplus
Thursday June 16, 2022	23	Review for Final
Friday June 17, 2022	Final Exam	FINAL EXAM 09:00-11:30 AM

USEFUL RESOURCES:

- <http://www.wolframalpha.com/> ; <https://www.desmos.com/calculator>
- <https://www.khanacademy.org/>
- Student Success Center – Offers FREE tutoring and FREE 1 on 1 ONLINE tutoring.
(<http://www.sa.sc.edu/ssc/>)
- https://sc.edu/study/colleges_schools/artsandsciences/mathematics/study/tutoring/index.php

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LockDown Browser + Webcam Requirement

This course requires the use of LockDown Browser and a webcam for online exams. The webcam can be the type that's built into your computer or one that plugs in with a USB cable.

Watch this brief video to get a basic understanding of LockDown Browser and the webcam feature.

<https://www.respondus.com/products/lockdown-browser/student-movie.shtml>

Download Instructions

Download and install LockDown Browser from this link:

<https://download.respondus.com/lockdown/download.php?id=943743695>

Once Installed

- Start LockDown Browser
- Log into Blackboard Learn
- Navigate to the exam

Note: You won't be able to access tests with a standard web browser. If this is tried, an error message will indicate that the test requires the use of LockDown Browser. Simply start LockDown Browser and navigate back to the exam to continue.

Guidelines

When taking an online exam, follow these guidelines:

- Ensure you're in a location where you won't be interrupted
- Turn off all other devices (e.g. tablets, phones, second computers) and place them outside of your reach
- Before starting the test, know how much time is available for it, and also that you've allotted sufficient time to complete it
- Clear your desk or workspace of all external materials not permitted - books, papers, other devices
- Remain at your computer for the duration of the test
- If the computer, Wi-Fi, or location is different than what was used previously with the "Webcam Check" and "System & Network Check" in LockDown Browser, run the checks again prior to the exam
- To produce a good webcam video, do the following:
 - Avoid wearing baseball caps or hats with brims
 - Ensure your computer or device is on a firm surface (a desk or table). Do NOT have the computer on your lap, a bed, or other surface where the device (or you) are likely to move
 - If using a built-in webcam, avoid readjusting the tilt of the screen after the webcam setup is complete
 - Take the exam in a well-lit room, but avoid backlighting (such as sitting with your back to a window)
- Remember that LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted

Getting Help

Several resources are available if you encounter problems with LockDown Browser:

- The Windows and Mac versions of LockDown Browser have a "Help Center" button located on the toolbar. Use the "System & Network Check" to troubleshoot issues. If an exam requires you to use a webcam, also run the "Webcam Check" from this area
- 24/7/365 Live Chat Support is also available from the Help Center, or from within the "it's not working" troubleshooter.
- Respondus has a Knowledge Base available from support.respondus.com. Select "LockDown Browser & Respondus Monitor" as the product to view helpful articles.
- If you're still unable to resolve a technical issue with LockDown Browser, go to support.respondus.com and select "Submit a Ticket". Provide detailed information about your problem and what steps you took to resolve it.