Math 1310-009: Engineering Calculus I *Fall 2020*

Instructor **Alexander Balk**, balk@math.utah.edu, JWB 304, 801-581-7512
Lectures: Mo Tu We Fr 7:30-8:20, JTB130 (in-person, 4 credit hours)
Office Hours: Mo & Tu 3:30 - 4:30 (via Zoom); or by appointment

Polls I will be polling the class; you will need to respond to the polling questions with your phone (or computer). **Please bring your phone to each lecture.**

TA Teaching Assistant and Lab Instructor **?**, ?@math.utah.edu, ?
Labs: Sections 010 (Th 8:35-9:25, JTB 110) and 011 (Th 7:30-8:20, LCB 215);
Office Hours: ? ?

Grader **?**, ?@utah.edu

Text *Calculus: Concepts and Contexts* (4-th ed.) by **James Stewart** Chapters: 1 - beginning of 6

Grading Policy The grade for the class will be calculated as follows:
10% - HW: Weekly homework
50% - Qz: Weekly in-class quizzes
20% - Lab: Weekly laboratory
20% - Final: Comprehensive concluding exam

The scale for the total grade (%):

	A (95-100),	A- (90-94),	
B+ (85-89),	B (80-84),	B- (75-79),	
C+ (70-74),	C (65-69),	C- (60-64),	
D+ (55-59),	D (50-54),	D- (45-49),	E (0-44)

HW Homework assignments will be posted in Canvas usually on Tu. You will need to upload your solutions to **Gradescope** (access via Canvas) **during the week ending Mo, 11:59pm**.
You will be able to see your graded HW with grader's comments in Gradescope.

Lab You consider more complicated problems in smaller groups during Lab sessions.
You start solving these problems in class and complete at home; solutions are graded by the TA.
Problem set is started on **Th** and due the following **Th**.

Qz The quizzes are held during the first 20 min of class on **We**.
I grade your Qz, and after each quiz, I routinely invite some students for a Zoom interview to ask them to explain their solutions and to answer some basic questions about the material studied up-to-date.
I upload your quizzes to Gradescope. You are able to see your graded Qz with my comments in Gradescope.

Final The problems of the concluding exam are similar to the ones in Lectures, Quizzes, Labs, and HW.
It is held on Th, 12/16/21, 8:00 - 10:00 am in the regular classroom.

Late/missing work It is important that you complete all your work on time (and understand the next material).
So, please, no late HW and no make-up of missed Qz. I will drop two lowest scores in HW and two — in Qz.

You need to solve all Qz & Final problems without books, notes, and electronics (including simple calculators).

For any problem, just the correct answer (without derivation or explanation) hardly costs anything.

The first Poll is during the first lecture, on the first Mo. The first Quiz is on the first We.
The first HW is assigned on the first Tu and is due before 11:59 pm on the second Mo.

Major Objectives - What you definitely need to learn in this class:

1. **Geometric and physical meaning of derivative and integral.**
   Rules/methods of differentiation and integration.

2. **Using derivatives to understand behavior of a function and sketch its graph.**
   How to find maxima/minima. How to find roots.

3. **The Fundamental Theorem of Calculus.**
   How to find integral quantities (such as volume, arc length, mass, and various others).

Clearly, you are interested in learning Calculus I, which is basic to all future classes. (Cheating is senseless.)
My goal is to make your learning effective and fast. Please attend all lectures and participate in all polls.
If something is unclear, please ask. Otherwise, small misunderstanding can cause significant problems later.
I would be very happy to discuss your questions. Ways to ask questions:

- During lectures. Others probably have similar questions and would appreciate if you ask.
- After lectures on all four days.
- In Canvas Discussions. Fellow students are encouraged to participate in discussions. TA and I will monitor these discussions and also respond.
- During office hours. You can request an appointment for office hours at a different day/time (both via Zoom or in-person).
- By email. (Please use this option for questions about your specific situation, while using the previous options for questions that may be of interest to other students.)

There is a possibility that our class (and even the entire University) will move on-line, meeting via Zoom. This could happen for couple weeks or for a longer period. Then you would need a computer with stable internet connection.