**Math 1220-001:** **Calculus 2** *Spring 2022*

**Instructor** **Alexander Balk**, balk@math.utah.edu, JWB 304, 801-581-7512
*Lectures:* Mo Tu We Fr 8:35-9:25, LCB 219 (in-person, 4 credit hours)
*Office Hours:* Tu 10-11, Fr 12-1 (both in-person); or by appointment (in-person or via Zoom)

**SI** Supplemental Instructor , @, @utah.edu,

**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.**

**Text** *Calculus with Differential equations* (9-th edition) by **D. Varberg, E. J. Purcell, S. E. Rigdon**
Chapters: 6-10. Reinforcing Chapter 5. Elements of Chapter 15.

**Grading Policy** The grade for the class will be calculated as follows:
**30% - HW:** Weekly homework
**50% - Qz:** Weekly in-class quizzes
**20% - Final:** Comprehensive concluding exam

The scale for the total grade (%): A (90-100) A- (85-89) B+ (80-84) B (75-79) B- (70-74)
C+ (65-69) C (60-64) C- (55-59) D+ (50-54) D (50-54) D- (45-49)

**HW** Homework assignments via WeBWorK:
You record your answers using internet and get immediate feedback
(if you give wrong answer, the computer tells you this, and you can submit your new answer;
you can usually do this many times, until you submit the right answer).
You need to complete each HW assignment **during the week ending Mo, 11:59pm**.

**Qz** The quizzes are held during **the first 20 min of class on We**.
I upload your quizzes to Gradescope. You are able to see your graded Qz with my comments in Gradescope.
You can see all comments for all students. The comments, specific to you, are marked.
Usually each quiz has 3 problems. 1-2 of them are similar to the ones considered in lectures.
The remaining 1-2 are similar to HW problems. But, unlike HW, you need to give thorough solutions.
Just the correct answer (without derivation or explanation) hardly costs anything for any problem
in **Qz** or **Final**. So, **when completing HW, please prepare to explain your answers**.

**Final** Held on Mo, 5/2/22, 8:00 - 10:00 am in the regular classroom.
The problems are similar to the ones in Lectures, Quizzes, and HW.

**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.

**Canvas** Canvas will be the main hub for this class. All grades will be recorded in Canvas.
From Canvas, you can access WeBWorK and Gradescope.
The polling is independent of Canvas; you do not need to register in order to participate in the polls.

**Discussion board** Please utilize the Canvas "Discussions" to ask questions that can benefit other students.
The "Discussions" will be monitored by SI and me.

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

The first Poll is on the 1st Mo; the first Quiz is on the 1st We; the first HW should be completed during the week ending on the 2nd Mo.

**Major Objectives**

1. **Taylor series.**
2. **Logarithmic and exponential functions.**
3. **Methods of integration.**
4. **Applying integrals to find various integral properties (like volume, moment of inertia, etc.)**
5. **L'Hopital's rule.**
6. **Improper integrals.**
7. **Ellipses, parabolas, and hyperbolas.**
8. **Polar coordinates.**
9. **Differential equations (introduction).**

Clearly, you are interested in learning Calculus, which is basic to all future classes. (Cheating is senseless.)
Calculus allows you to easily solve many problems, inaccessible by other means.
To make your learning effective and save your time, please attend all lectures and participate in all polls.
If something is unclear, please ask.