Instructor: Alexander Balk, JWB 304, balk@math.utah.edu, 801-581-7512
Lectures: Mo We 1:25-2:45, JWB 335
Office Hours: Tu 1:30-2:30 via Zoom, after lectures in person & through Zoom, or by appointment (via Zoom & in person)

TA: Tess Sheets, sheets@math.utah.edu
Office hours: Mo 4:15-5:15 via Zoom https://utah.zoom.us/j/3967345812

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

Textbook
No textbook is required for this class. Suggested texts:

1. *Applied Partial Differential Equations* by J. David Logan
   This book is often used in our undergraduate PDE class Math5440. The text is on a more elementary level than our class, but the book is brief and simple, without long math calculations.


   Our undergraduate engineering PDE class Math3150 is based on chapters 1-4 & 10 of this text. It contains much more material, often extending beyond our class. This text is more oriented towards scientific applications, while the previous one is more oriented towards mathematical reasoning.

4. *An Introduction to Partial Differential Equations* by Yehuda Pinchover and Jacob Rubinstein

5. *Equations of mathematical physics* by Vladimir V. S.
   A text based on generalized functions; it contains a detailed description of generalized functions and their Fourier transforms.
   You need to have a first course in PDEs before reading this and the next text.


Grading
The grade for the class will be based on:
Policy
   - HW — weekly homework (with oral interviews) — 70%
   - F — comprehensive final (written & oral) — 30%

   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 We. You will need to upload your solutions to Gradescope (access via Canvas) during the week ending Tu, 11:59pm. The first HW is due during the second week.
After each HW, I will ask some students for a Zoom interview to discuss their HW solutions and some basic questions.
The interviews will usually occur on Th or Fr 1:30 - 2:30 pm. The interview grade will be in the form of an adjustment:
As a result, the HW grade can go up (possibly giving extra credit) or down.

F
The Final consists of two parts:
   - Written exam Th 4/29/21, 1-3 pm
   - Oral exam Mo 5/3/21, 30 min during 1-5 pm; you will need to sign up for an individual Zoom appointment.
The problems of the written exam are similar to the ones in Lectures and HW.
During the oral exam, we could discuss your solutions in the written exam and some basic questions from the entire course.

You need to solve problems in HW interviews, written and oral F without books, notes, and any help from humans or computers.
In Gradescope, you can see your graded work (HW and written F) with my comments.
Google can help on “how to scan and upload to Gradescope”; the latter needs a single pdf that contains all pages.