Differential Equations with Applications
MATH 4512

Instructor: Bernardo Cockburn.
Fall 2020 schedule: MWF 10:10-11:00, Zoom ID: 995 5028 1624

- **Objective**: In this course, we study several basic aspects of differential equations modeling phenomena of interest in physics and engineering.

- **Textbook**: *Differential Equations and their Applications*, by Martin Braun, Springer, 1993 (4th. edition). We will cover the first four chapters.

- **Grade**: 40% homeworks (four homeworks), 30% midterms (three take-home midterms) and 30% take-home final (due on December 23). There will be one week to work on the homeworks, two days to work on the midterms, one day to work on the final.

- **Office hours**: By appointment **only**. To get one, just send me an e-mail to cockburn@math.umn.edu.

	classes			subsections		
Sept.	–	9	11	–	§1.2	§1.4
Chapter 1	14	16	18	§1.5	§1.8	§1.10
	21	23**HW**	25	§1.13	§1.13	§1.14
	28	30	2**MT**	§1.15	§1.16	S
Oct.	5	7	9	§2.1	§2.2	§2.3, 4
Chapter 2	6	14	16	§2.5	§2.6	§2.6
	19	21**HW**	23	§2.9	§2.10	§2.11
	26	28	30**MT**	§2.12	§2.13	S
Nov.	2	4	6	§3.1, 2	§3.3, 4	§3.5, 6
Chapter 3	9	11	13	§3.7	§3.8	§3.9
	16**HW**	18	20	§3.10	§3.11	§3.12
	23	25**MT**		§3.13	S	
Dec.	30	2	4	§4.1	§4.2	§4.3
Chapter 4	7	9	11	§4.4	§4.5	§4.6, 7
	14	16**HW**	–	§4.8	§4.12	

Homework due at 10:00am = **HW**, Mid-Term due at 10:00am = **MT**, solution of mid-term = S.