Fall 2020 MATH 246 Syllabus — Ruiwen Shu

INSTRUCTOR:
Ruiwen Shu   Email: rshu@cscamm.umd.edu.
Office hours: 2:00pm-3:00pm Tuesday (on Zoom), and by appointment.
More information will be available at my website https://shuruiwen.com/teaching/

LECTURE (all sections): TuTh 12:30pm-1:45pm, use Zoom through ELMS

DISCUSSION:
section 0411: 8:00am-8:50am Friday   section 0421: 9:00am-9:50am Friday
section 0431: 10:00am-10:50am Friday   section 0441: 12:00pm-12:50pm Friday

TEXTBOOK:
1. Main textbook: https://courses.math.umd.edu/math246/NODE/2021F/main.html (log in with your directory ID and password). Exercises and external resources can also be found on this website.
2. For MATLAB part: Differential Equations with MATLAB, Third Edition, by Brian R. Hunt, Ronald L. Lipsman, John E. Osborn, and Jonathan M. Rosenberg, J. Wiley and Sons, New York, 2012.
MATLAB tutorial: https://www.mathworks.com/learn/tutorials/matlab-onramp.html

EXAMS: there are three in-class midterm exams and one two-hour final exam. You are allowed to use the lecture notes, your own notes, and calculators during the exam.

The final exam will take place in the exam week, but the specific time has not been decided.

QUIZZES: there is a 15-minute quiz at the end of every Tuesday's lecture (except the first week, Thanksgiving week and exam weeks), based on the contents of the previous week. There are 10 quizzes in total, and 2 lowest grades will be dropped when calculating the final grade.

GROUP WORKS: the discussions will be mainly devoted to group works. Groups of size 4~5 will be assigned randomly at the beginning of the course. Group work problems are posted on my website shortly after Thursday's lecture, and each group is supposed to discuss the problems during the Friday's discussion and submit a solution at the end of the discussion. There are 13 graded group works in total (except for the first week, which is for practice, and the Thanksgiving week), and 3 lowest grades will be dropped when calculating the final grade.

MATLAB PROJECTS: there are 6 MATLAB projects, which will be assigned on my website. The projects will be assigned on Fridays (see the schedule) and the due date is the next Friday. The first one is done by individuals, while the others are done by groups of two (which will be assigned after the first one). 1 lowest grade will be dropped when calculating the final grade.

HOMEWORK: there is no homework to submit, but you are suggested to do the 'Exercises' in Textbook 1 as practice.

GRADES: the total points will be calculated as follows:

Quizzes	10
Group works	10
MATLAB projects	10
Midterms	15 * 3 = 45
Final exam	25
TOTAL possible points	100

The letter grade, which may be A+, A, B+, B, C+, C, F, will be determined according to your total points, but the cutoffs will not be determined until the final exam is graded.

Tentative schedule:

Weeks	Tuesday	Thursday	assign MATLAB projects
1	09/01: 0, 1.1	09/03: 1.2	
2	09/08: 1.3	09/10: 1.4, 1.5	1
3	09/15: 1.5, 1.6	09/17: 1.7	
4	09/22: 1.8	09/24: 1.9	2
5	09/29: Midterm 1	10/01: 2.1, 2.2	
6	10/06: 2.2	10/08: 2.4, 2.5	3
7	10/13: 2.6	10/15: 2.7	
8	10/20: 2.8	10/22: Midterm 2	4
9	10/27: 2.9	10/29: 2.9	
10	11/03: 2.9	11/05: 3.1, 3.2	5
11	11/10: 3.4	11/12: 3.4, 3.5	
12	11/17: 3.5	11/19: Midterm 3	
13	11/24: 3.7	11/26: Thanksgiving	
14	12/01: 3.8	12/03: 3.9	6
15	12/08: 3.10	12/10: 3.10	