MATH 246, SPRING 2014 SECTIONS 01XX, MWF
11:00AM - 11:50AM ARM 0126

A current, updated copy of this syllabus will be available
http://www2.math.umd.edu/~matei/
Dr. M. Machedon, Math Bldg. 3311. e-mail: mxm@math.umd.edu
Office hours: Mondays and Wednesdays from 2 to 2:50 (in Math 3311).

Discussion sections
0111 Tu 8:00am - 8:50am MTH 0403 Jonathan Huang
0112 Tu 8:00am - 8:50am MTH 0201 Jacky Chong
0113 Tu 8:00am - 8:50am MTH 1313 Terence Long
0121 Tu 9:00am - 9:50am MTH 0403 Jonathan Huang
0122 Tu 9:00am - 9:50am MTH 0201 Jacky Chong
0123 Tu 9:00am - 9:50am CHM 0127 Terence Long
0131 Tu 10:00am - 10:50am MTH 0403 Jonathan Huang
0132 Tu 10:00am - 10:50am MTH 0201 Jacky Chong
0141 Tu 11:00am - 11:50am MTH 0102 Jonathan Huang
0142 Tu 11:00am - 11:50am MTH 0201 Jacky Chong

Teaching Assistants’ office hours:
Jacky Chong, Math 3301, jwchong@umd.edu Mondays 10-11, Fridays 2-3
Jonathan Huang, Math 0206, jahuang@math.umd.edu Tuesdays 2-3, Wednesdays 10-11
Terence Long, Math 0210, tlong271@math.umd.edu Thursdays 1-3

Please feel free to come to any of these office hours.

Textbooks: On-line notes by Prof. Levermore
https://courses.math.umd.edu/math246/NODE/1314S/main.html (log in with your University username and password), and a Matlab textbook by Hunt, Lipsman, Osborn, Rosenberg , Differential Equations with Matlab, third edition.
The final grade will be based on Matlab Homework (10%), three 15 minutes in-class quizzes (10%) three in-class exams (45%), and a uniform final exam (35%).

Students with less than 50% of the maximum possible will receive an F. I expect the C/D cutoff to be 60%.
The most recent exams (given by Prof Levermore) can be found at http://www.terpconnect.umd.edu/ lvrmr/2013-2014-F/Classes/MATH246/Exams.html These will serve as practice exams for our class.

Quiz dates:
Wednesday, February 19 (covering the material of weeks 1-3)
Wednesday, March 26
Wednesday, April 30
Exam dates
Wednesday, February 26
Monday, April 7
Wednesday, May 7
Uniform final exam: Thursday, May 15 1:30-3:30pm at a location to be announced later.

Make-up policy: There will be no make-ups for in-class exams or quizzes. In the case of an absence due to illness, religious observance, participation in a University activity at the request of University authorities, or other compelling circumstances, your blank grade will be replaced by the average of your other in-class exams (respectively, quizzes).

No late (Matlab) homework will be accepted. In the case of an excused absence your blank grade will be replaced by the average of your other Matlab grades.
Matlab assignments should be printed neatly so both input and output show, and should be handed to your TA (not to the professor) on the Tuesday they are due. You are allowed (and encouraged) to do the Matlab homeworks in teams of two (not more).

The major grading events for this class are the three in-class exams and the final. I will accept a self-signed note which acknowledges valid reasons for missing one exam, but will require formal written documentation (such as from a medical provider) for subsequent absences.
After each in-class exam or quiz students have two weeks to appeal the grading. Appeals for the final grade must be made in writing.

On exams students must write by hand and sign the following pledge:
I pledge on my honor that I have not given or received any unauthorized assistance on this examination.

During exams, students are expected to apply the ideas they learn to some problems that are significantly different from the examples and homework they have seen.
Students who require special examination conditions must register with the office of the Disabled Students Services (DSS) in Shoemaker Hall. Documentation must be provided to the instructor. Proper forms must be filled and provided to the instructor before every exam.

The University’s policy on religious observance and classroom and tests states that students should not be penalized for participation in religious observances. Students are responsible for notifying the instructor of projected absences within the first two weeks of the semester. This is especially important for final examinations.

I will communicate with the class by e-mail. You are expected to have a correct e-mail address. You can update your e-mail address at http://www.testudo.umd.edu/apps/saddr/

The following problems from the online notes are assigned, but should not be turned in. You should keep your work in a notebook, and check your answers against the ones in the notes. Some of these problems will appear on quizzes and in-class exams.

Problems for week 1 (Jan 27)
I. 2 : (1 a, b, f), (2), (4), (6), (8), (12), (15)
I. 3: (1), (5), (7), (11), (15)

Problems for week 2
I. 4 (1), (3)
I. 5 (2), (3), (4), (17)

Problems for week 3
I. 6 (2), (6), (7), (8), (12)
I. 7 (2), (3), (9), (10) You do not have to memorize the formula for Runge-Kutta on page 13!

Problems for week 4
I. 8 (1), (2), (3), (8), (12)
I. 9: Not covered.

Matlab assignments, from the Matlab textbook, to be turned in during the Tuesday discussion.
Due Tuesday, Feb. 4: Read Chapters 1-4 in enough detail so you can solve and turn in Problem set A 1a, 1c, 3a, 3c, 7a, 8a, 8c, 8d, 8e
Due Tuesday, February 18: Read Chapters 5, 6, 7. Turn in B 3 a-c, 5, 11 a, 20 a-e You can look at the answer to problem 5 for hints, but please don’t copy it word by word.
Due Tuesday, February 25: Read pages 98-106 and 109-112 from the Matlab textbook.
Solve and turn in Matlab C 3a, 6 a, 16 a, c.
Assignments for the middle part of the semester
From the on-line notes, not to be turned in:
For Tuesday, March 4:
2.1: (4), (8)
2.2: (1), (3), (7), (11), (12), (18), (25)
2.3 (1 a, b), (3a)
For Tuesday March 11:
2.4: (3), (4), (6), (8), (11), (22)
2.5: (9),
For Tuesday, March 25:
2.6: (2), (6), (7), (13), (15), (21), (22), (23)
2.7: (2), (8), (9)
For Tuesday, April 1:
2.8: (1), (4)
2.9: (6), (8), (12), (15)
MATLAB assignments, to be turned in:
Due Tuesday, March 25
D1 (a), D 4
Due Tuesday, April 9:
MATLAB E 13 (a, b) Here $u_c(t) = u(t - c) = \text{heavyside}(t - c)$.
Assignments for the last third of the semester

From the on-line notes, not to be turned in:

For Tuesday, April 15:
3.1: 5, 6, 8
3.2: 4, 8, 10, 11
3.3: 8-13, 15, 20

For Tuesday, April 29:
3.4: 2, 3-8, 12, 14, 15
3.5: 1-4, 7-9, 14-16, 21, 22, 25
3.6: 1-8, 19-22

For Tuesday, May 6:
3.7: 1, 2, 8, 12, 13, 18
3.8: 1, 7-11

For Tuesday, May 13
3.9: 2, 3

MATLAB assignment, to be turned in on Tuesday, April 29: F 1 (first matrix only).

The location of your final exam on Thursday May 15 1:30-3:30 will be

TYD 0130 if your TA is Jonathan Huang (section numbers ending in 1)
BRB 1101 if your TA is Jacky Chong (section numbers ending in 2)
PHY 1410 if your TA is Terence Long (section numbers ending in 3)
TYD=Tydings Hall
BRB=Biosciences Research Building
PHY=Physics Building

Please check a campus map for the location of these buildings.