# MATH314: ADVANCED DIFFERENTIAL EQUATIONS – SPRING 2026

**Instructor**:    Dr. Harbir Lamba

E-mail:    hlamba@gmu.edu (only email me from your official GMU email account).

Office:    Exploratory Hall, Room 4459

Office Hours:    TR 12.30-1.30 or by appointment. I will often have extra hours on Fridays as well. I will also answer email questions any time except on the days of the tests.

Webpage:    **http://math.gmu.edu/∼harbir/m314**

Textbook:    S. Strogatz, *Nonlinear Dynamics and Chaos,* 3rd Edition. We will cover most of the first 8 Chapters and then as much as we can of the rest of the book.

Homework questions will be set after each section is completed. These will not be collected or graded but you are STRONGLY advised to attempt them all and write out your solutions to every question as if you were handing them in. You are encouraged to discuss and work through these problems amongst yourselves. I will go through the majority of the homework questions in the next class and/or post solutions on the web, but you will not benefit from this unless you have attempted them properly beforehand. Note that the homework questions are the ABSOLUTE MINIMUM you should be doing each week.

The course will be evaluated with 3 (1 hour) in-class tests on February 10th, March 17th and April 14th. Your 2 best results will each contribute 25% towards the evaluation and 50% will come from a (cumulative) final exam on May 7th.

The grading scale is:

$A^-$ to $A^+$    70% to 100%

$B^-$ to $B^+$    60% to 70%

$C^-$ to $C^+$    50% to 60%

$D$           40% to 50%

$F$           0% to 40%

If you miss more than one of the in-class exams then you will need to provide very good (and fully-documented) reasons for missing each of them. There will be no practice exams, make-up tests, alternative test dates, or extra-credit assignments. You are expected to abide by the University Honor Code and all suspected violations will be reported to the Honor Committee. No outside materials, calculators or notes will be allowed during any of the examinations.

Additional Remarks:

1) Please ask questions in class. It makes things more interesting for everyone, myself included.

2) If you need academic accommodations, please contact the Office of Disability Resources. All academic accommodations *must* be arranged through that office.

3) It is YOUR responsibility to regularly check the course webpage http://math.gmu.edu/∼harbir/m314 and your official university email address for announcements. We will not be using Canvas in any significant way so don't look there for information during the semester.

4) Attendance at lectures is not mandatory. So if you do attend it is expected that you keep the use of all electronic devices to an absolute minimum and do not distract either me or your fellow students.

5) Finally, you are required to familiarize yourself with the Common Policies that can be found at https://stearnscenter.gmu.edu/home/gmu-common-course-policies/