

MATH5290: Methods of Numerical Computations
9:30-10:50AM M/W; NTDP D212

Instructor: Dr. Yanyan He, GAB 440H & NTDP F293, yanyan.he@unt.edu

Office Hours: 1:00-2:00PM (M/W; In person: NTDP F293, Remote: Zoom meeting ID 4361460619) or *by appointment*

Textbook: None

Prerequisite: Calculus, Linear Algebra, and Programming.

Course Content:

Introduction to numerical methods, system of equations, matrix decomposition, polynomial interpolation, least squares problem, numerical integration, nonlinear equations, numerical methods for ordinary differential equations and Monte Carlo methods.

Grading:

Homework/Programming Projects: 100%. No final exam.

Homework Rules:

- Individual work is required for all graded assignments and the Final.
- The Submission must be one (1) PDF in Canvas with a page scanned for each page of your work. The pages must be in correct order with right side up. If you submit more than one PDF, only the first one will be graded.
- If the assignment involves computer programming, submit a short write-up describing the problem, your solution technique, and the result. The solution to each problem must be clearly labeled with problem number.
- All assignments are due at 11:59 pm of the due date. The Canvas gradebook will automatically assign a zero to assignment NOT submitted prior to 11:59 pm.

Course Policies:

- No late homework will be accepted!
- Do not expect to be able to do some extra work to help your grade either before or after the final exam.

Note:

The lectures from Apr 4 to May 4 will be delivered remotely.

Minimum Technology Requirements:

Computer, reliable internet access, Zoom, [Canvas Technical Requirements](https://clear.unt.edu/supported-technologies/canvas/requirements) (<https://clear.unt.edu/supported-technologies/canvas/requirements>).

Computer Skills & Digital Literacy:

Using Zoom and Canvas, downloading and installing MATLAB, and scanning documents (that can be done using smartphones).

Academic Integrity

The content of the Student Handbook regarding the University's Policy of Academic dishonesty applies to this course. The occurrence of academic dishonesty will result in the grade of F for the course.

Disabilities

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the [ODA website \(https://disability.unt.edu/\)](https://disability.unt.edu/).

IMPORTANT NOTICE: The instructor keeps the right to make necessary changes for this course during the whole semester!