

UNCW MAT 325: Numerical Algorithms

FALL 2015

INSTRUCTOR: Dr. Daniel X. Guo

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OFFICE HOURS: M, W, F: 10:50am – 11:50am, 1:50pm – 2:50pm and by appointment

TEXTBOOK: **Applied Numerical Analysis Using MATLAB**, second edition by Laurene V. Fausett.

HOMEWORK: Homework assignments will be made during each class meeting. It is expected that these assignments will be completed promptly and thoroughly. It is through the working of these problems that an understanding of the concepts and a mastery of the procedures are most successfully attained.

PROJECTS: Compute-assisted projects will be assigned, collected, and graded regularly.

TESTS: Three tests plus a comprehensive final exam will be given during the course. The tentative dates for the tests are **Friday September 25**, **Friday October 23**, and **Friday November 20**. The final exam will be given **Friday December 4**, from 11:30am to 2:30pm. No makeup of final exam for any reason.

GRADING: The homework will collectively count 15%, each of the three test scores will count 20%, the project grades will collectively count 5%, and the final exam will count 20% toward the final average. Grades will be assigned based on the final average using the following scale: 0.00-59.9 = F, 60.0-69.9 = D, 70.0-79.9 = C, 80.0-89.9 = B, 90.0-100.0 = A. Plus/minus grades might also be used at the discretion of the instructor.

POLICIES

1. **Attendances:** Regular and punctual attendance is expected and will be monitored. Excessive absences (more than two) will result in the denial of makeup test, additional office hours, and bonus points.
2. **Makeup:** No make-up test will be given unless illness or emergency. Instructor must be notified in advance or on the test day. Make-up test will be given on the earliest available date. No late homework. No makeup for the final exam for any reason.
3. **Academic Honor Code and Seahawk Respect Compact:** Please refer to Section V in your student handbook and Dean of Students' website (<http://www.uncw.edu/stuaff/doso/>) about Academic Honor Code for the definition and procedures about academic dishonesty offenses. The Seahawk Respect Compact

(<http://www.uncw.edu/diversity/src.html>) expresses the core values essential to an open, respectful learning and working environment.

4. **Disability:** UNCW Disability Services supplies information about disability law, documentation procedures and accommodations that can be found at <http://www.uncw.edu/stuaff/disability/>. To obtain accommodations the student should first contact Disability Services and present their documentation to the coordinator for review and verification.

5. **Religious Observance Policy**

In accordance with NC SL 2010-211, you are entitled to two excused absences for religious observances **per academic year**. You must inform me in writing the first week of class if you will be missing any classes due to religious observance and using one of the two permissible absences for the academic year. In addition, please inform the Registrar the first week of class who will then confirm your intentions to miss class with the impacted course instructors. Any absence for religious purposes will be considered unexcused unless you submit the request in writing the first week to either me or the Registrar.

6. **The UNCW Statement on Diversity in the University Community**

As an institution of higher learning, the University of North Carolina Wilmington represents a rich diversity of human beings among its faculty, staff, and students and is committed to maintaining a campus environment that values that diversity. Accordingly, the university supports policies, curricula, and co-curricular activities that encourage understanding of and appreciation for all members of its community and will not tolerate any harassment or disrespect for persons because of race, gender, age, color, national origin, ethnicity, creed, religion, disability, sexual orientation, political affiliation, marital status, or relationship to other university constituents.

7. **Zero Tolerance Policy**

UNCW practices a zero tolerance policy for violence and harassment of any kind. For emergencies contact UNCW CARE at 962-2273; Campus Police at 962-3184; or Wilmington Police at 911. For University or community resources visit: <http://www.uncw.edu/safe-relate/campusResources.htm>. Violence prevention information and resources available at <http://www.uncw.edu/safe%2Drelate/>. We will focus several class discussions on the importance of reducing violence and increasing tolerance in schools and at UNCW.

8. **Cell Phones, PDAs, Laptops**

Please silence your cell phone and do not make calls, access applications or text during class. If you have a personal, urgent matter for which you need to be on call, please let me know in advance. In addition, please do not have active any PDAs or laptops/netbooks/iPads open and active unless the activity warrants. We will use these devices in selected activities and they are permissible then.

MAT 325 – Computational Mathematics

Credits: 3

Prerequisite: MAT 162. Introduction to scientific computing and numerical algorithms: Includes scientific and numerical computations, elementary discussion of errors, linear algebraic systems, eigenvalue problems, curve fitting, root finding, and numerical solution of ordinary differential equations. The algorithmic approach and the efficient use of the computer are emphasized using scientific programming software.

COURSE OUTLINE: This course will cover the chapters 1 – 8. The computer-assisted projects will be assigned from sections in chapters 2, 3, 4, 5, 6, and 7.