



MAD6406 – Numerical Linear Algebra — Fall, 2016

Time and Location: MWF period 8, Little Hall, Room 233

Office Hours: MWF period 7 and by appointment made 24 hours in advance.

Note on Email: I often check my email just in the early afternoons on weekdays. So if you need a reply by a certain time, plan ahead accordingly.

Text: *Numerical Linear Algebra* by Lloyd N. Trefethen and David Bau III, published by SIAM: Society for Industrial and Applied Mathematics, 1997.

Prerequisites: MAS 3114, 4105, or 4124; and programming language

Brief Course Description: Topics most useful in applications with emphasis on numerical techniques: systems of linear equations, positive definite and toepplitz systems, least squares problems, singular value decomposition, and eigenvalues. Numerical stability and efficiency of algorithms as well as effect of perturbations on the problem. Companion to MAD 6407.

Grades: Grades will be based either on homework (see the homework page for guidelines) or else on a project building on the student's research. The project must be at least 5 pages, typed and be approved via email by September 16. Students will be required to sign a contract specifying which option they have chosen.

Honor Code: In this course authorized aid on homework consists of talking to me, other students, and looking at the text for this course. This means that you are not allowed to look in other books for solutions to the homework or at the written solutions of other students.

Class Attendance: Most students benefit a great deal from attending class regularly. Arriving late and/or leaving early, reading the newspaper, looking at your cell phone, etc. disrupts the class and is rude and unprofessional.

Additional Information:

Grades: Grading will be in accord with the UF policy stated at <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

Honor Code: "UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class."

Class Attendance: "Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>."

Accommodations for Students with Disabilities: "Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc/>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester."

Online Evaluations: "Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>."

Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.