MATH/CS 5466· NUMERICAL ANALYSIS

Spring 2016 · Virginia Tech

Lectures:	Monday/Wednesday/Friday 11:15AM–12:05PM, McBryde 134
Web Site:	http://www.math.vt.edu/people/embree/math5466
Instructor:	Mark Embree (embree@vt.edu), McBryde 575, (540) 231-9592
Office Hours:	Monday 4:00–5:30PM, Thursday 3:30–5PM, or by appointment.

Prerequisites: Students should be comfortable with fundamental concepts from matrix computations and floating point arithmetic, as can be acquired in MATH 5465. Pointers to background resources will be provided for students who have not taken MATH 5465. Students should also be able to write short MATLAB programs to illustrate concepts from the class.

Text: *Numerical Analysis* by Walter Gautschi, 2nd ed., Springer, New York, 2012.
Available at VT via: http://link.springer.com/book/10.1007/978-0-8176-8259-0

Grade Policy: 50% exams, 50% problem sets
Scores of at least 90, 80, 70, and 60 guarantee grades of at least A−, B−, C−, and D−, respectively. Class participation and engagement in active learning activities will influence borderline grades. Improving performance over the course of the semester will also be considered. Homework and exam grades will be posted on the class Scholar site.

Exams: Two closed-book exams will each account for 25% of the final grade.
The first exam will be held on the evening of Wednesday 2 March from 7–9PM (tentative).
The second exam will be held on Wednesday 11 May, 10:05AM–12:05PM.

Problem Sets: There will be approximately eight problem sets over the course of the semester. Rigorous solutions are expected; strive for clarity and elegance. The assignments will involve hand calculations, some proofs, and MATLAB computations. Students are encouraged to submit hard copies of the assignments. Any electronic submissions must consist of a single PDF file. ***MATLAB code must be included for all computational exercises.***

Late Policy: You may turn in two problem sets one class period late without penalty; further late assignments will be penalized 20% each. Work will not be accepted more than one class late.

Re-Grade Policy: If your work has been graded incorrectly, you may submit a re-grade request. Clearly explain the perceived error on a separate sheet of paper, staple it to the front of your graded paper, and give it to the instructor within one week of the paper's return.

Honor Code: Virginia Tech's Honor Code applies to all work in this course. You are encouraged to discuss the problem sets with others, but your write-ups must be your own individual work. (A good rule of thumb: spend an hour on each problem by yourself, before consulting classmates.) Transcribed solutions and copied MATLAB code are both unacceptable. The exams must be your own independent effort.

Programming: Most problem sets will require a modest amount of MATLAB programming, often based on codes provided by the instructor for class demonstrations. Your programs should adhere to good programming standards, and must not be copied from another student (but you can edit codes the instructor posts to the class website). Consult the course website site for pointers to MATLAB resources.

Any student with special needs or circumstances requiring accommodation in this course is encouraged to contact the instructor during the first week of class, as well as the Dean of Students. We will ensure that these needs are appropriately addressed.