# MATH 5630/6630 - Introduction to Numerical Analysis I
## Fall 2015

|        | Section | Class Time | Venue |
|--------|---------|------------|-------|
| Venue: | 095 | TR 9:30 a.m. - 10:45 a.m. | Parker Hall 320 |
|        | 145 | TR 2:00 p.m. - 3:15 p.m. | Parker Hall 249 |

Instructor: Dr. Hans-Werner van Wyk

Office: 242 Parker Hall

Email: hanswernervanwyk@gmail.com *(will change)*

Office Hours: TR 11:00 a.m. - 12:00 p.m. and 3:30 p.m. - 4:30 p.m.

Website: `http://people.sc.fsu.edu/~hvanwyk/teaching/MATH5630/MATH5630.html` *(will change)*

**Course Description** This is the first of two courses on numerical analysis, the study of algorithms, their analysis and uses in approximating solutions to mathematical problems. We focus on the numerical solution of equations, numerical approximation of functions, numerical differentiation and integration, numerical solutions of ordinary differential equations, and error analysis.

**Prerequisites** MATH 2650, basic programming skills.

**Text** Uri M. Ascher & Chen Greif, *A First Course In Numerical Methods*, SIAM 2011 (Philadelphia)

**Software** Students can use any high-level programming language for coding assignments, but we recommend using Matlab. Matlab is installed on the lab computers in Parker Hall, or can be accessed remotely from your own computer via the virtual machine. Download the client from `https://cosam-view.auburn.edu/`. Log in using the hostname cosam-view.auburn.edu from the client. Once you are in the virtual machine, go to the program — cosam software — math and select Matlab.

**Grading Policy** Final grades are composed as follows:
30% - Homework, Programming Assignments and Quizzes
40% - 2 Midterm Exams (20% each)
30% - Final Exam

**Homework** There will be about 10 graded homework assignments, constituting 30% of the final grade. Computer code submitted as part of a homework assignment must be well documented.

**Exams** There will be two in-class exams, announced at least one week in advance, but scheduled tentatively for 09/24/2015 and 11/17/2015. The

final exam schedule can be found on the Registrar's website. For our class, the following schedule applies:

| Class Time | Exam Date and Time |
|---|---|
| TR 9:30 a.m. - 10:45 a.m. | December 11, 8:00 a.m. - 10:30 a.m. |
| TR 2:00 p.m. - 3:15 p.m. | December 9, 4:00 p.m. - 6:30 p.m. |

**Make-up exams** will be given only under special circumstances. For more information on what constitutes an acceptable excuse for absence and on students responsibilities in arranging make-up exams, consult the Auburn University policy on class attendance. Except in extenuating circumstances, such as continued absence of the student or the advent of University holidays, a make-up exam will take place within two weeks from the time that the student initiates arrangements for it.

**Honesty** All portions of the Auburn University student academic honesty code (Title XII) found in the Student Policy eHandbook will apply to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

**Cellphone policy** Cellphones must be turned off during class and exam periods.

**Accommodations for Disabilities** Student accommodations can be arranged through the Office of Accessibility, 1228 Haley Center, 844-2096 (V/TT). Please submit approved accommodations electronically through AU Access and meet with me to discuss the details as soon as possible (preferably during the first week of classes).

**Registration** It is your responsibility to make sure that you are properly registered for this particular section of Math 5630 or Math 6630.