

Syllabus for Math 408/508
Applied Numerical Methods I
Summer 07 : 5:45pm- 7:00pm, 7:15pm-8:30pm

Textbook: Numerical Analysis
By Timothy Sauer (Addison Wesley)

Extra class notes will be distributed frequently.

Instructor: H. Kaneko, PhD
Professor of Mathematics

Office: ECS 2214
683-3882

Office Hours: 4:40-5:30pm MW, Others by appointments.

Email: hkaneko@odu.edu

Course Objectives:

To obtain knowledge of numerical methods and error analysis used for approximating solutions to various problems arising in applied mathematics, engineering and physics. In particular, we will study solutions of nonlinear equations, solutions of system of linear equations, interpolation, polynomial approximation, numerical integration and differentiation and numerical solution of ordinary differential equations.

Grading System:

Final Grade = $0.2 * \text{Assignments} + 0.5 * \text{Two Tests Ave} + 0.3 * \text{Final}$

There will be a few problem-sessions in which a team of students present homework problems. The presentation is not graded but it is required.

Honor Code:

By enrolling in this course, you agree to adhere to the honor code on all written work: “I pledge to support the Honor Code of Old Dominion University. I will refrain from any form of academic dishonesty or deception, such as cheating or plagiarism. I am aware that as a member of academic community, it is my responsibility to turn in all suspected violators of the honor code.”

Computing Policy:

A student is permitted to use a hand-held calculator or any other commercially available mathematical softwares, such as Matlab, Mathematica etc on homework exercises. An accessibility to a programming language such as Fortran, C++, Matlab, Mathematica is a plus. A student version of Matlab can be purchased from MathWorks approximately for \$100.

Attendance and Make-up Policy:

A student who must miss class is expected to get the notes from other students. Students are expected to be present for two tests and the final exam. A make-up exam will be given only in the case of documented illness and in other exceptional circumstances for which the student must provide documentation. Although excessive absences will have a negative effect on a student’s learning and performances, absences from classes are not counted.

Topics Covered:

Selected topics from Chapters 1, 2, 3, 5, 6 and 7 will be covered.

Important Dates:

Wednesday, May 23	Test 1
Monday, May 28	Memorial Day – No Class
Monday, June 18	Test 2
Wednesday, June 20	Final Exam (5:45pm-8:45pm)