Class: MWF 3:05 - 3:55 pm Fisher 132

Instructor: Dr. Kathleen Feigl
Office: 211 Fisher Hall
Phone: 487-2221
E-mail: feigl@mtu.edu
Web: http://www.math.mtu.edu/~feigl

Office Hours: MWF 4 - 5 pm, and by appointment

Prerequisites: Introductory course in linear algebra, and knowledge of programming language (Fortran, C++, Pascal) or computing software such as Matlab, MathCad, Mathematica, or consent of instructor.

ISBN: 0-07-239910-4

Contents: The course addresses theoretical issues, implementations and applications. Topics include:
• Computer arithmetic and errors
• Systems of linear algebraic equations (direct and iterative methods)
• Nonlinear equations and systems of nonlinear equations
• Least squares
• Eigenvalue problems
• Conditioning, stability, error analysis, etc.

References: Numerical Linear Algebra, Lloyd N. Trefethen and David Bau, III, SIAM, 1997

Homework: Homework, including computer problems, will be assigned and collected regularly (30% of grade).

Exams: There will be a midterm exam (30% of grade) and a cumulative final exam (40% of grade).

Grading Scale: A=90-100%, AB=85-89%, B=80-84%, BC=75-79%, C=70-74%, CD=65-69%, D=60-64%, F<60%

Class Policies: - Attendance in class is mandatory.
    - Students are expected to hand in homework assignments on time.
    - Only with prior notice and a valid reason will a make-up exam be allowed.

Notice: MTU complies with all federal and state laws and regulations regarding discrimination, including the ADA Act of 1990. If you have a disability and a need, reasonable accommodation for equal access to education or services can be made through the Dean of Students Office (Gloria Melton 487-2212). For concerns regarding discrimination of any kind, please contact your advisor, department head, or affirmative actions office.