

**MAIT 613, Advanced Applied Linear Algebra**  
**Fall 2006**  
**T 6:00pm-8:45pm**  
**Math Bldg. 3206**

**Dr. Joe Kolesar**  
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**Office Hours:** After Class or By Appointment.

**Required Text:**

- Applied Numerical Linear Algebra, by James W. Demmel

**Suggested Text:**

- Matrix Computations, 3rd ed., by G. H. Golub and C. F. VanLoan
- Numerical Linear Algebra, by Lloyd N. Trefethen and David Bau
- Linear Algebra And its Applications, by Gilbert Strang

**General Description:** Topic to be covered may include linear systems and least square problems, the singular value decomposition, error analysis, accuracy and stability, matrix decompositions, iterative solvers, Krylov subspace methods, symmetric and non-symmetric eigenvalue problems.

**Homework:** We will have regularly scheduled homework assignments and quizzes on covered material to help increase understanding.

**Exams:** There will be a midterm and final exam.

**Point Values:** The various components of the course will have the following point values.

Homework	30%
Midterm	30%
Final Exam	40%
Total	100%

**Advice:** Mathematics is not a spectator sport. Success in this course is highly correlated with careful study and punctual completion of suggested homework problems. Before EACH lecture you should:

- review your class notes
- complete the assigned homework problems
- read the section(s) in the text which are scheduled to be covered.

**Note:** Grading scheme etc. may change...