

Applications of Numerical Methods
Math 272
Winter 2007

Instructor: Alan Ableson

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Course web site: <http://www.mast.queensu.ca/~math272/>

An introductory course on the use of numerical algorithms in science and engineering applications. Topics include: solving linear and nonlinear equations, interpolation, integration, and numerical solutions of ordinary differential equations. Extensive use is made of MATLAB, a high level interactive numerical package.

Textbook:

Numerical Computing with MATLAB, Cleve B. Moler, 2004, SIAM.

Web edition of the book is published by The MathWorks, Inc. It is available at <http://www.mathworks.com/moler>

Mark Distribution:

6 assignments – 30% (5% each)

Mid term – 20%

Final – 50%

Parts of the course

- **Lectures** (WLH 205, slot 4) will focus on the background and theory of the course material, and will include some MATLAB implementations and demonstrations
- **Tutorial** (Wed 4:30 JEFF 126; Thu 4:30 JEFF 128) will cover further details of using MATLAB
- **Labs (JEFF 157)** will be for students to work on the assignments and get help from the TAs. The lab time will not be sufficient to complete the assignments, and students will have to spend some of their own time in the lab.

Software

MATLAB will be the software used in this course. It is available in JEFF 155 and JEFF 157. A student version is also available for purchase through MathWorks for \$100 USD.