

Engineering Analysis ENG 3420 Fall 2009

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Office: HEC 439 B

Office hours: Tu-Th 11:00-12:00

Lecture 5

- Last time:
 - Applications of Laplace Transform for solving differential equations.
 - Example.
- Today:
 - Internal representations of numbers and characters in a computer.
 - Arrays in Matlab
 - Matlab program for solving a quadratic equation
- Next Time
 - Roundoff and truncation errors
 - More on Matlab

Insight not numbers!!

- Engineering requires a quantitative analysis (ultimately some numbers) but the purpose of engineering analysis is to gain insight not numbers!!
- Engineering analysis is based on concepts from several areas of math and statistics:
 - Calculus (integration, differentiation, series)
 - Complex analysis
 - Differential equations
 - Linear algebra
 - Probability and statistics
- The purpose of this class is not to teach you Matlab, but to teach you how to use Matlab for solving engineering problems.
- Matlab is just a tool, an instrument. What good is to have a piano without being taught how to play....
- One must be familiar with the software tools but understand the math behind each method.