

MCS 471: Numerical Analysis

Fall 2009

MWF 2-2:50pm

Professor: Benjamin Akers
Office: SEO 1213
Office Hours : Mon 12-1pm & Wed 3-4pm and by appt.
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Recommended Text(s): There is no required textbook, however I recommend that all students procure one. As the material is fairly standard, you may choose which book you prefer to own as a supplement to the course. Texts which I recommend include: *Numerical Mathematics* by Grasselli & Pelinovsky, *Numerical Analysis* by Sauer, or *Analysis of Numerical Methods* by Isaacson & Keller.

Course Description: We will introduce the basic ideas and techniques of numerical analysis. Methods will be presented for solving algebraic equations, evaluating integrals, approximating derivatives, and solving differential equations.

Grading: The course grade will be determined by the sum of the three homeworks (10% each), two exams (20% and 30% respectively), and random (pop) quizzes (20% total). The quiz score will be the out of ten quizzes (with approximately 3 dropped). Quizzes will be given at the beginning of class; extra time will not be given for tardy students. **There will be no makeup quizzes or late homework.** Homework may be turned in early.

Schedule

Event	Date	Grade Fraction
Homework 1	Fri Sept. 25th	10%
Exam 1	Wed Oct. 21st	20%
Homework 2	Fri Oct. 30th	10%
Homework 3	Wed Nov. 25th	10%
Final Exam	Wed. Dec. 9th	30%

<http://www.math.uic.edu/~akers/Teaching.html>

Course Materials: The homework assignments for this class will require computer programming. There is no requirement as to which computer language is used. Some popular options include C++, Java, Fortran, Maple, Matlab (or Octave).

Course Policies:

- Academic dishonesty will not be tolerated in any aspect of the course. Students should consult the office of judicial affairs for university policy with regard to academic dishonesty.
- Students with disabilities should contact the Disability Resource Center for accommodation at the beginning of the semester. Accommodations can not be given retroactively for work already performed.
- Students who will miss large portions of class due to unforeseen circumstances should contact the instructor during the semester to discuss their options. After course grades are assigned they are final; this is not the time to discuss long absences.
- Students are responsible to attend class during scheduled meetings.

Professionalism: Students will act as professionals. This pertains to all course correspondence, assignments, and class conduct.