Dr. Kevin Kreider, CAS 273, (330) 972-7519, kreider@math.uakron.edu
web page:

http://www.math.uakron.edu/~kreider/

Office Hours: MTTh 1:30pm – 2:30pm and by appointment
Text: none.

Policies:

1. If you have any questions or concerns about this course, don’t hesitate to talk with me.

2. Course grades are determined by a total of 500 points:
   - 200 pts  2 exams (100 pts each)
   - 150 pts  homework
   - 150 pts  programming projects

   The tentative grade scale is: A (460-500), A- (450-459), B+ (440-449), B (410-439), B- (400-409), C+ (390-399), C (360-389), C- (350-359), D+ (340-349), D (300-339), D- (290-299), F (0-289).

3. Homework problems will be assigned and collected regularly.

4. There will be two midterm exams. The first exam will cover parabolic equations, and the second will cover hyperbolic equations. The first exam will probably be given in Week 5, and the second exam will be given during the final week.

5. Near the end of the semester, you will be encouraged (perhaps required) to bring an appropriate research problem to class for discussion. I hope to analyze several problems in class, and to address the issues surrounding their numerical solution.

6. There will be several (probably 4-5) programming projects during the semester. The preferred programming language is Fortran, although C (or one of its flavors) is acceptable. The use of MATLAB is discouraged, but will not be prohibited. Programs will be graded on the correctness of algorithm, documentation, style and output format. More details will be provided with each project. It is vital that you have some background in numerical analysis or numerical methods, and in scientific programming. This is not an introductory course, and programming will not be taught.

7. You must have a basic knowledge of linear algebra; in particular, Gaussian elimination, LU decomposition, eigenvalues and eigenvectors, matrix diagonalization. Also, it is advantageous to have studied partial differential equations and/or numerical linear algebra.
8. All University regulations apply to this course. In particular, the policies concerning academic dishonesty, sexual harassment and withdrawal from a course apply. June 30 is the last day to withdraw. I will sign drop slips without restriction.

9. If you carry a cell phone, please turn it off while you are in class. Each time your cell phone rings during class, you will lose 5 homework points.

BOOKS ON RESERVE IN THE SCIENCE LIBRARY:


TENTATIVE TIMELINE

   Introduction, 1 week
   Parabolic PDEs, 4 weeks
   Hyperbolic PDEs, 3 weeks