

Math 467 Spring 2005

Syllabus

INSTRUCTOR: Dr. Hundley

OFFICE: Olin 234

OFFICE HOURS: Mon/Tue/Thur: 10AM, Fri 2PM

As usual, feel free to schedule an appointment for another time if you'd like.

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CLASS WEBSITE: people.whitman.edu/~hundledr/courses/M467.html

1. COURSE INFO: Math 467

This is a course about numerical methods and the associated numerical errors. If you are performing any kind of scientific computation, it is critical that you understand the sources of error as well as techniques that will minimize that error.

Here is a brief list of the topics: Introduction (Ch 1-2), Solving Linear Systems (Ch 3), Data fitting (Ch 4-5), Differentiation and Integration (Ch 6). and Solving Nonlinear Equations (Ch 7). I'd like for us to also go into numerical solutions for differential equations, Ch 10-12. Also, you should note that Chapter 17 represents some projects that I'll assign as we go along. More on that later.

This is the first time we've used this textbook, so we'll see how we progress through the material.

2. TEXT: Numerical Methods: An Introduction to Scientific Computing using MATLAB. Peter Linz, Richard Wang, Jones and Bartlett, 2003.

If you're ordering this text outside of our bookstore, please be sure that the ISBN matches. The ISBN for our text is: 0-7637-1499-2

3. Technological Assistance: Graphing/Programmable calculators are allowed except those that can perform symbolic computations (See me if you're not sure what this means). We will be using MATLAB (short for Matrix LABratory) on the Math Lab computers. There is also some software that comes with the text (NASOFT). If necessary, we'll load that onto the machines in the lab.

4. Grading Criteria.

- Exams. There will be two exams and a Final Exam. Some of the exams may have a take-home component so that you can work with Matlab. Exams will make up 75% of the overall class grade.

- Participation/Quizzes (10%): I will be asking you to present results of homework to the class every now and then. Some sections will be more challenging than others. We will have a short quiz during those sections (will be announced at least two class sessions prior).
- Projects (15% of the overall grade). There will be an occasional project assigned. The goal of the projects is to help give you a better understanding of the physical meaning of differential equations. There will be a handout discussing what you'll need to turn in later.

Grading:

90-100%=A, 80-89%=B, 70-79%=C, 60-69%=D, 59 and below=F

I will use the plus/minus grading only sparingly in those borderline cases.

5. Help! I encourage you to come see me. If you can't make it during office hours, either email me if you have short questions, or make an appointment.
6. Academic Honesty. Academic standards will be *strictly* adhered to as outlined in the College's policies. This means that cheating will not be tolerated. Looking at another student's exam or quiz (whether or not you mean to copy answers) while taking it will be considered cheating. *Please don't test this policy!* Students caught cheating for the first time will fail the exam or quiz during which the cheating took place, and the Dean of Students will be notified. Continuation of this behavior will lead to an automatic failing grade for the course, and may include other administrative action.
7. If you have a learning disability, please let me know as soon as possible so that we can make alternative assessment methods. Please do not wait until the day of the exam!