

Applications of Mathematical Software - Math 609

Syllabus

- 2 days — An introduction to UNIX, the operating system on the computers we will be using.
- 1 day — An introduction to emacs, probably the most common text editor in the UNIX world.
- 8 days — A discussion of MATLAB, an interactive software package to do many numerical calculations that arise in linear algebra, calculus, and differential equations.
- 7 days — A discussion of Mathematica which does symbolic calculations in many fields of mathematics
- 8 days — A discussion of TeX, METAFONT , AmsTeX, and LaTeX
- 2 days — A discussion of how to design your own web page and put course information and mathematical information on it.

Course grade

The course grade will be determined by class participation (50%) and by individual and group homework assignments (50%).

Rationale

There are many mathematical software packages that are useful to our students, both in the courses they take and the courses they teach. At present our students mainly learn these packages by buying books and/or manuals or by watching someone else. This one-quarter course, to be taught in a computer lab, will give them the knowledge necessary to understand these packages and will give them the practice necessary to be proficient users of them. It will also help prepare them to use these packages in a classroom setting, both in showing students results which are not obtainable (or not easily attainable) using pencil and paper, and in showing students how to use these packages to obtain the results themselves.

Disability Statement

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu>.

Academic Misconduct Statement

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The

term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee. For additional information, see the Code of Student Conduct (http://studentaffairs.osu.edu/resource_csc.asp).