ME 443
USING MATHEMATICA IN THE ME DEPARTMENT COMPUTER LAB

Updated January 11, 2009

GENERAL INFORMATION ABOUT THE COMPUTER LAB

The ME Department Computer Labs are in Rooms 05 and 06 in the basement of the Hopeman Building. The original labs were made possible by grants from NSF and from General Motors. Subsequent upgrades to the lab have been made possible by funding from the Department of Mechanical Engineering, from the College Deans' Office, and from IBM. There are 16 PC’s and a laser printer in Room 05, and 10 PC’s and a laser printer in Room 06. All the PC’s run Windows XP.

Mathematica is the principal software tool in this course, and Version 6 is installed on all of the machines (see below for a discussion of Mathematica versions). Other software installed on the machines includes Matlab, Microsoft Office, Internet Explorer, and Adobe Acrobat Reader. At present we have licenses for up to 15 concurrent users of Mathematica.

LAB SCHEDULE

The lab is open whenever the building is open, which is generally from 6:30 AM until 11:00 PM Monday through Thursday, from 6:30 AM until 6:00 PM on Friday, from 11:30 AM until 6:00 PM on Saturday, and from 11:30 AM until 10:00 PM on Sunday. Any software or hardware problems in the lab should be reported to either of the two faculty directors of the lab: Prof. Al Clark (clark@me.rochester.edu) and Prof. Sheryl Gracewski (grace@me.rochester.edu) or to problem@seas.rochester.edu.

ACCESS TO LAB AND MACHINES

Access to the lab is by a keypad combination lock. The combination will be changed frequently, and it will be given out in class. The IBM machines are running Windows NT 2000, and it will be necessary for you log in to use these machines. The user name is student and the password is MechE.

DOWNLOADING COURSE FILES FROM THE INTERNET

All documents relevant to the course are posted on the course web site. The URL is http://www.me.rochester.edu/courses/ME443. The linked pages there will direct you to various items such as homework assignments, homework solutions, and examples in the form of Mathematica notebooks.
MATHEMATICA VERSIONS

The newest Mathematica, version 6, was released in May of 2007, and the latest release is 6.0.3. Version 6 is an upgrade from version 5.2. There are a number of incompatibilities between these versions that may prevent notebooks written in one version from running in the other version.

USING THE MATHEMATICA TUTORIAL

The Mathematica tutorial may be downloaded from the Prof. Clark’s ME201 web site at http://www.me.rochester.edu/courses/ME201/websoft/softw.html. Each executable line in the tutorial is in blue. Work through the notebook line by line. To execute any particular line, move your cursor to that line using the mouse, and then left click to position the cursor in that line. Then hit enter (not return), and Mathematica will execute the line for you. Continue through the notebook in this way.

SAVING YOUR FILES

If you want your file to survive after you finish your computing for the day, it is crucial that you save it on your own memory stick or storage location, because user files are frequently removed from the hard disks of the machines. Please remove any files you created from the computer hard disk.

GETTING HELP WITH MATHEMATICA

There are several sources of help for your work with Mathematica. Reference books on Mathematica are described in the Mathematica tutorial. A second source of help is available online. When you are in Mathematica, you can use the Help option to obtain information about anything in Mathematica. This also is described in more detail in the tutorial. As a final source of help on Mathematica, I will be available during my office hours, and also at some other times.

SOME RULES FOR USE OF THE ME COMPUTER LAB

To keep the computer lab in good working order and to make resources maximally available, you are asked to observe the rules listed here for the lab.

- No software is to be installed on any machines in the lab. If you have suggestions for software to be installed, send them to either of the two faculty directors of the lab.
- No user produced files are to be left on the hard disk at the end of a session.
- Priority is given to students doing work in ME courses. Technical work for other courses, or career-related personal work such as resume preparation is permitted whenever there are free machines.
- The School of Engineering has specific policies on computer use, all of which apply to users of the ME Computer Lab (http://www.seas.rochester.edu/CNG/docs/policy.html). Violations of these policies could result in disciplinary action.

IF YOU ARE THE LAST PERSON TO LEAVE THE LAB, PLEASE MAKE SURE THAT THE LAB DOOR IS CLOSED AND LOCKED.