Rutgers University
The State University Of New Jersey
College of Engineering
Department of Electrical and Computer Engineering

332:501 Systems Analysis Fall 2002

INFORMATION SHEET

- **CONTENT:** Discrete and Continuous time systems. The concepts of state and state-space. Transform methods (Z, Laplace, Fourier, etc). Stability, controllability, observability. Other interesting topics as time permits. We will cover each topic in somewhat more mathematical detail than the corresponding undergraduate course.
- **PHILOSOPHY:** You will be required to think carefully and critically about the material in this course. For example, you might be required to derive new material on the homework or even on an examination using what you've been given in lecture. If you are used to simply using formulas ("plug & chug") this course offers a great opportunity to expand your problem-solving ability. If you do not wish to expand your problem solving ability, you might want to rethink why you are submitting yourself to the pain and agony of a graduate ECE program.
- **SECTION & INSTRUCTOR:**
  - **Place & Time:** SEC-209, T&Th, 6:10-7:30
  - **Instructor:** C. Rose, EE Room 122, 445-5250, email: crose@winlab.rutgers.edu
  - **WEB PAGE:** http://www.winlab.rutgers.edu/∼crose/index501.html
    Please use this page to get on the course mailing list. THIS IS IMPORTANT. Announcements are made on the course mailing list and you'll miss them unless you sign up.
- **HANDOUTS:**
  - Handouts will be available via a world wide web link on the ECE machine and will therefore be available to you almost anywhere on the face of the earth. Almost no paper will be handed out in class other than examinations. Welcome to the electronic age! Of course, you can also download any postscript or html file and print it wherever you are if you require a paper copy.
- **OFFICE HOURS:**
  - There are NO formal office hours except by appointment and these only in extreme circumstances. However, there will be a course 332:501 email list and newsgroup. This will be our primary forum for answering questions and providing mutual help. Furthermore, I am ALWAYS available via email albeit with some lag. You will have the benefit of a RECORD of your colleague's and my questions and answers.
- **TEXT:**
  - REQUIRED: **Linear Systems Theory**, F. Szidarovszky & A.T. Bahill, CRC Press (latest edition).
- **RECOMMENDED COURSES:** Probability/Stochastic Processes, Linear Algebra.

- **EXAMINATIONS:**

  There will be a midterm and a final, and perhaps a "pop" quiz as well (before the first Examination.

  - **Midterm:** Tuesday, Oct 29, 2002, 6:10-7:30 in class
  - **Final:** TBA according to finals schedule

- **EXAMINATION POLICIES:**

  - **Exam Notes:** For exam N you may prepare $2N$ sides of $8.5 \times 11^{1/2}$ paper as notes. Your "Cheat Sheet" is intended as a pacifier. It's primary use is as a study aid and focus. Calculators, computers etc. will be useless during examinations although you may bring one if it makes you feel better.
  - **Grading Errors:** Solutions will be returned with all examinations. **All questions about grades must be submitted IN WRITING within one week after each examination is returned. No grade change requests will be accepted after this period.** I will reconsider the entire examination while also considering the area(s) requested by you and return it as soon as possible. This grade is final.
  - **Missed Exams:** Missing any of the exams results in your grade being determined completely by performance on the other exams; this policy applies to both illness and such things as job interviews. Missing the final will result in failure of the course. Only in exceptional cases will a makeup final be administered after clearing your absence with the Dean.
  - **Cheating:** Sorry to have to mention this, but in this imperfect world I have to. Don't cheat. You will fail the course and face expulsion. In addition, I will do all in my legal power to make sure your exploits are well-known both within and outside the University community. You will find it is a very small world come job-hunting time.

- **GRADING:**

  - **Weighting:**
    - **Midterm: 40%**
    - **Final: 60%**
    - **Problem Sets: 0%**

      Problem sets and solutions are available over the 332:501 WWW home page. The importance of homework as a comprehension and study aid cannot be overemphasized. Not doing the homework is courting almost certain disaster.
  - **Policy:** This course will not be "graded on a curve" in the usual sense; i.e., the "average" grade in the course might be A, B, C, D or F depending upon how well I feel you have mastered the material. If you are an especially smart bunch you might all get A's (my secret hope every term). The converse is also possible. There will be no awards for "most improved" or other such things. MORAL: DO WELL ON THE EXAMINATIONS.