PURDUE UNIVERSITY
School of Electrical and Computer Engineering
ECE 602 Lumped System Theory
TTh 10:30-11:45pm in EE 222
Class Information
Spring 2011
[Revised January 11, 2011]

Instructor: Ilya Pollak
MSEE 334
494-5916
ipollak@ecn.purdue.edu
Office hours by appointment (please see me after class or send an email to arrange an appointment).

Course Website: http://www.ece.purdue.edu/~ipollak/ece602/SPRING11/ece602.html

Discussion forum:
https://kiwi.ecn.purdue.edu/rhea/index.php/Special:AWCforum/?action=sf/id7

Required text:
Linear System Theory and Design, 3rd Edition, by C. T. Chen, Oxford Press, 1999, ISBN 0-19-511777-8.

Computation of the final grade:

Four homeworks	24% (6% each)
Four homework reviews	16% (4% each)
Three exams	60% (20% each)

Homework:
There will be four homework assignments. Homeworks must be done in LaTeX. You must submit a PDF file, along with LaTeX file and figures. The submission must be done through Rhea. Instructions on how to submit will be poster later. For each homework, there will be a double-blind peer review. Each student will be required to review the homeworks of up to three other randomly selected students. The reviews will be done in LaTeX. The reviewers will not know whose homeworks they are reviewing; the authors will not know who the reviewers are.

Homework 1 will be due by 10am Tuesday February 8.
Homework 1 review will be due by 10am Tuesday February 22.
Homework 2 will be due by 10am Tuesday March 8.
Homework 2 review will be due by 10am Tuesday March 29.
Homework 3 will be due by 10am Tuesday April 5.
Homework 3 review will be due by 10am Tuesday April 12.
Homework 4 will be due by 10am Tuesday April 19.
Homework 4 review will be due by 5pm Monday April 25.

Homework and Academic Dishonesty:

You must work on the homework assignments individually; however, you are allowed to discuss homework problems with anyone you wish and use any sources, including the compilations of old solutions available through various fraternities and sororities, as well as the multitude of websites such as Course Hero, Cramster, and Koofers, and anything else you can find online, in the library, or anywhere else. However, the usual rules for citing sources apply. If you copy anything verbatim or paraphrase someone else's work, you need to clearly indicate what has been copied or paraphrased and provide a citation. If someone else has communicated any part of the solution to you, please find a way to indicate this, too. Please talk to me if you are unsure about citation rules. For guidance on citation style, see owl.english.purdue.edu/owl/resource/747/01/ .

Exams:

There will be three exams:

Exam 1: Wednesday February 16 7-9pm in MSEE B010
Exam 2: Wednesday March 23 7-9pm in MSEE B010
Exam 3: Wednesday April 27 7-9pm in MSEE B010

If you need to miss an exam because of an illness or family emergency, please let me know *beforehand*. If it is an illness, you will need a note from your doctor, with his/her name and phone number, saying that, according to the doctor's best judgment, you need to miss the exam. A note simply saying that you have been to PUSH is not enough. The note does **not** need to say anything about the nature of the illness---that's private information between you and your doctor.

If you miss an exam due to a legitimate reason, you will be allowed to replace its score with the scores from the other exams.

To comply with the University regulations, five classes will be canceled on dates TBA, in order to compensate for the evening exams.

Re-Grade Requests:

If you dispute your grade on any homework or exam, you have *one week* to request a change in the grade. After this time, no further change in grade will be considered. When you ask for a re-grade, please submit a hard copy and attach a sheet to the front, indicating where you think that your paper was graded incorrectly. Also, date the sheet. Do not alter anything in the exam paper itself. I reserve the right to re-grade the whole paper. **Only written re-grade requests will be considered; there will be no discussion of grades.**

Academic Dishonesty

The ECE faculty expect every member of the Purdue community to practice honorable and ethical behavior both inside and outside the classroom. Any actions that might unfairly improve a student's score will be considered cheating and will not be tolerated. Examples of cheating include (but are not limited to):

- Sharing results or other information during an examination.
- Bringing forbidden material or devices to an examination.
- Working on an exam before or after the official time allowed.

- Requesting a re-grade of answers or work that has been altered.
- Representing as your own work anything that is the result of the work of someone else.
- Pretending to be sick in order to avoid taking an exam when in fact you are healthy.
- Pretending to have a family emergency to avoid taking an exam when in fact no such emergency exists.

Cheating on an exam will result in a failing grade for the entire course. Please note that after the exam papers are graded, they will be copied; therefore, requesting a re-grade of an exam which has been altered will automatically result in a failing grade for the course. All occurrences of academic dishonesty will be reported to the Assistant Dean of Students and copied to the ECE Assistant Head for Education. If there is any question as to whether a given action might be construed as cheating, please see me before you engage in any such action.

Campus Emergencies

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances. In such an event, information will be provided through the course website.

Approximate Syllabus

This course is devoted to studying system models---mostly lumped-parameter, causal, linear models whose inputs and outputs are 1D signals. We will follow the first six chapters of the text quite closely:

1. Introduction.
2. Mathematical Descriptions of Systems.
3. Linear Algebra (bases, linear equations, similarity transformation, Jordan form, positive definiteness, SVD, matrix norms).
4. State-Space Solutions and Realizations.
5. Stability.
6. Controllability and Observability.

If we have any time left, we will then cover more advanced topics and/or applications.