

ECE 301 (MWF 2:30-3:20 Section)
Spring 2013
General Information

Prerequisites: (ECE 202, minimum grade of 'C' or BME 305) and (MA 262 or MA 366 or MA 266).

Staff:

job	name	office	phone	email
lecturer	James V. Krogmeier	MSEE 338	43530	jvk at purdue dot edu
TA	Aziza Satkhozhina	MSEE 364		asatkhoz at purdue dot edu

Office Hours for A. Satkhozhina: Monday from 10:00 am to 12:00 pm, Wednesday from 3:30 pm to 5:30 pm, Thursday from 12:00 pm to 2:00 pm. A. Satkhozhina's office hours will be held in MSEE 364.

Office Hours for J. V. Krogmeier: Monday/Wednesday 3:30 pm to 5:00 pm.

Text: A. V. Oppenheim and A. S. Willsky, *Signals and Systems*, 2nd edition, Prentice-Hall, 1997.

Web site: kiwi.ecn.purdue.edu (or Google "Rhea Purdue") and follow links to Class Wikis and then Krogmeier's Spring 2013 ECE 301 Section.

Homework:

- Weekly.
- Turn in during class or by 5:00 pm on the date due in the box in the window of MSEE 330. Please put your homework in the correct box for your section!
- Questions posted on the web.
- Solutions posted on the web.
- Grading: some problems will be graded in detail and the others will be checked off as having been attempted.
- Current graded homework will be returned in class and old graded homework will be available in the window of MSEE 330.
- Rules: The only rule is that you cannot use a photo copier or similar device to create the document you hand in. So working in groups, using references, etc., are all fine. For your own benefit, please attempt the problems yourself. Otherwise the exams will appear impossibly difficult!
- For your own benefit please:
 - Put the problems in the correct order.
 - Write on only one side of the paper.
 - Staple the sheets together.
 - Don't use paper torn out of a spiral bound notebook.

If you'll do this it will be much easier to handle the large amounts of paper that are created by ECE 301 and a happy grader is a generous grader!

Exams:

- Three one-hour evening exams (tentative):
 - Exam 1: Monday February 11 from 6:30 to 7:30 p.m. in LYNN 1136.
 - Exam 2: Monday March 4 from 6:30 to 7:30 p.m. in FRNY G140.
 - Exam 3: Monday April 8 from 6:30 to 7:30 p.m. in LYNN 1136.
- A two-hour final during finals week.
- All exams will be closed book and no calculator. Typically some tables will be provided on the exam itself.
- The exact material to be covered will be announced about one week before the exam.

- No makeup exams will be given and it will not be possible to take an exam early. A student wishing to miss an hour exam must request permission in advance. Such requests will be considered on a case by case basis. See the grading policy described below.
- Procedures: The School is very concerned about cheating and individual students have come talk to me. Therefore, I want to try to structure the exams in a way that minimizes the temptation to cheat:
 - Assigned seating.
 - First 50 (110) minutes: If you so desire, get up, turn in your exam, and leave.
 - Last 10 minutes: Exams will be accepted only from students who remain in their assigned seat until the end of the hour (two hours), stop working at the end of the hour (two hours), and pass their exams to the end of the row to be collected.

Regrades: Regrade requests on any graded exercise must be submitted in writing within one week of the date when the material was returned to you. Regrade requests cut both ways—if the staff made a mistake in your favor they can take back the points.

Grades: In order to receive a passing grade for the course (i.e., letter grade ‘D’ or better) you must satisfy the 301 Learning Objectives (see the list below). Satisfaction of the Learning Objectives will be assessed using the three hour exams and the final exam.

Upon determination that you have satisfied the Learning Objectives, an overall score will be computed using the algorithm below.

- All evening exams that you did not take are replaced by the final exam after mean and variance normalization (assuming permission has been granted in advance).
- Extra credit from Rhea work is added to the homework score (Rhea projects can be used to replace up to 3 homework scores. See Rhea page for details).
- Then the overall score is computed as:

$$\text{overall score} = .10 * \text{homework} + .50 * \text{average of hour exams} + 40 * \text{final exam}$$

The course will not use the plus-minus grading system. Assuming that you have satisfied the Learning Outcomes, your final letter grade will be determined by rank ordering according to the overall score and applying a letter grade curve.

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.

Cheating: The School is very concerned about cheating. Most of the following is nearly verbatim from the School of ECE statement on academic dishonesty, which was sent to the faculty in January 1999.

The Purdue community expects every member of the community to practice honorable and ethical behavior both inside and outside the classroom. Any actions that might unfairly improve a student’s score on homework, quizzes, examinations, or labs will be considered cheating and will not be tolerated. Examples of cheating include (but are not limited to):

Homework: The only requirement is that whatever you turn in is something that you wrote up (by hand or by computer) yourself. Working in groups is fine. There are lots of solutions around. However, if you can’t work these problems by yourself then you will find that the exams are very hard. Furthermore, the only way to make sure that you can work them by yourself is to actually work them by yourself. This is a variation on the adage: “no pain, no gain”! If you have questions please ask.

Exams: The list of things not to do includes, but is not limited to:

- Share results or other information during an exam.

- (b) Bring forbidden notes or devices (e.g., calculators) to an exam.
- (c) Work on an exam before or after the official time.
- (d) Share questions, results, answers, or other information with someone who has not yet taken the exam.
- (e) Request a regrade of work that has been altered.

If you have questions please ask.

At the instructor's discretion, cheating on an assignment or examination will result in a reduced score, a zero score, or 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 the instructor or the teaching assistant before you engage in any such action.

ABET: The Learning Objectives for ECE 301 are

- (i) an ability to classify signals (e.g., periodic, even) and systems (e.g., causal, linear) and an understanding of the difference between discrete and continuous time signals and systems. [a]
- (ii) an ability to determine the impulse response of a differential or difference equation. [a]
- (iii) an ability to determine the response of a linear systems to any input signal by convolution in the time domain. [a, e, k]
- (iv) an understanding of the definitions and basic properties (e.g., time-shift, modulation, Parseval's Theorem) of Fourier series, Fourier transforms, bilateral Laplace transforms, Z transforms, and the discrete time Fourier transforms and an ability to compute the transforms and inverse transforms of basic examples using methods such as partial fraction expansions. [a]
- (v) an ability to determine the response of linear systems to any input signal by transformation to the frequency domain, multiplication, and inverse transformation to the time domain. [a, e, k]
- (vi) an ability to apply the Sampling theorem, reconstruction, aliasing, and Nyquist's theorem to represent continuous-time signals in discrete time so that they can be processed by digital computers. [a, e, k]