Electronics Laboratory (II)

Course Description

The Electronics Laboratory II is an extension of Microelectronics II. Its objective is to those already taken the theory part can have an in-depth understanding on the concepts taught in class. The hand-on course emphasize on both digital and analog circuit designs either for discrete circuits.

This course first introduces the simulation tool, then fundamental component, operational amplifier (OP), then basic components for applications, such as analog-to-digital converters and filter, ending with waveform generating circuits and output stage design.

The course is outlined as follows:

- Electronic Instruments
- PSPICE Analyses
- Feedback Circuit
- CMOS OPAMP (I)&(II)
- Basics of Analog-to-Digital Converters
- Filter (I)&(II)
- Waveform Shaping Circuit
- Output Stage
- Lab Project

Pre-requisite Courses:

- General Physics (I) (must)
- Electric Circuits (I) (must)
- Microelectronics (I) (must)

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Course Website: http://moodle.ncku.edu.tw
Textbook: materials available on the course website or in-class handouts.

Lab Assignments

Ten lab assignments and one lab project will be given for the semester. Due day will be specified in the problem sheet.

- NO late submission will be accepted
- To get credit for your pre-lab reviews and laboratory assignments, your submissions must be done professionally and seriously. Your official name, course number and homework number must be visibly shown in each assignment.
- All submission will be due in class hours via the inspection of teaching assistants. If you fail to do so, your assignment is considered OVERDUE and gets NO credit. An extra paper copy needs to be delivered in class.

Grading Policy

The tentative weights of the homework assignments and the exams are listed as below and they are subject to minor change.

- Participation
- Pre-lab reviews
- Laboratory assignments
- Final lab project
Course Policy

- Encourage you to discuss assigned problems with peers
- Must complete his/her assignment independently or as specified
- Any person/team who is found to be dishonesty in pre-lab reviews, laboratory assignments, examines or quizzes, the involved person(s) will receive “0” on the evaluated instrument.

Notes:

- All announcements will be put on the course website from time to time.
- All broadcast emails to you will send through moodle (course website) and only to your email account in NCKU, i.e., nxxxxx@mail.ncku.edu.tw unless you revise the corresponding email address on moodle.
- Please send questions to TA via meLab2-2012@lpvlsi.ee.ncku.edu.tw.
- Any other notes will be described during the class session.