# EE C128 / ME C134 Feedback Control Systems
# Fall 2014 Syllabus

## Course contents

Analysis and synthesis of linear feedback control systems in transform and time domains. Control system design by root locus, frequency response, and state space methods. Applications to electro-mechanical and mechatronics systems.

## Instructor


- Professor Alexandre Bayen
  - bayen@berkeley.edu
  - Office hours
    - 109 McLaughlin Hall
    - (510) 642-3585 (only during OH)
    - Time Tu., Thu., 5:00 - 6:00 p.m. (right after class)


## Teaching assistants


- Roy Dong
  - roydong@eecs.berkeley.edu
  - Office hours
    - 337B Cory Hall
    - Thursday, 1:30 – 3:30 p.m.
- Cameron Rose
  - c_rose@eecs.berkeley.edu
  - Office hours
    - 504 Cory Hall
    - Monday, 2:00 - 3:00 p.m.
    - Friday, 2:00 - 3:00 p.m.

## Lectures

- 145 Moffitt Undergraduate Library
- Tuesday & Thursday, 3:30 – 5:00 p.m.

## bCourses

All students are responsible for checking the bCourses course page for all course content. The GSIs will use bCourses to send out announcements and post homeworks, readings, and labs for the class. Students can set their preferences for email notifications of all posted content under the "Notifications" tab in their personal settings in the top bar of the bCourses site. It is STRONGLY recommended that all students leave the course activities notifications enabled. All of the assignments along with their due dates can be viewed and downloaded under the "Assignments" tab. Additionally, the course will be sectioned into weeks under the "Modules" tab with all of the assignments, labs, and readings posted under their corresponding week. Lab reports and homeworks should be submitted online through the web interface on each assignment's page.

## Homeworks

Weekly homeworks, posted on bCourses at least one week before due date, unless specified otherwise. Homeworks are due on Tuesday in class, at the beginning of class, unless specified otherwise.

## Labs

See *Lab Policies* document for further details.

- 125 Cory Hall
- Roy
  - Wednesday, 4:00 – 6:00 p.m.
  - Friday, 10:00 a.m. – 12:00 p.m.
- Cameron
  - Monday, 3:00 – 5:00 p.m.
  - Wednesday, 1:00 – 3:00 p.m.

The labs will work as follows. Labs will be done in groups of three; each group needs to submit only one lab report. Reports will be submitted online through bCourses. Most labs have a Pre-lab assignment. Due to limited lab hours, please come to the lab session with the Pre-labs completed.

Due to the large course size, there will be more groups than available stations. In each lab section, equipment time will be divided into 2 1-hour sessions. The TAs will assign time slots for their lab sections on a rotating basis. If you have any questions about equipment scheduling, feel free to email your TAs. Generally, Roy will attend the later Wednesday and Friday sessions and Cameron will attend the Monday and early Wednesday sessions.

## Grading

- Homework, 20%
- Lab, 30%
- Midterm, 20%
- Final, 30%

## Text

N.S. Nise, *Control Systems Engineering*, 6th edition, Wiley, 2010

## Course resources

All course resources will be made available on bCourses. If you are enrolled in the class, but for some reason do not have access to the bCourses site, please let us know as soon as possible.

## Recommended software

MATLAB & Simulink Student Version

- Check UC Berkeley Software Central: `http://ist.berkeley.edu/software-central/`
- Available in lab