ME132 is an introductory course on dynamic system and feedback for undergraduate students in Engineering and Science majors, and maybe more... The principal goal of the course is to introduce basic concept of feedback control systems, as well as the mathematical tools for system analysis and controller design.

Teaching Staff

Instructor: Dr. George Anwar (ganwar@berkeley.edu (mailto:ganwar@berkeley.edu)), 120 Hesse Hall. Office hours are:

> - **Tuesday, 10:00AM-12:00PM**
> - **Thursday, 10:00AM-12:00PM**
> - **or whenever you find me**

Occasionally, these will need to be changed. We will post announcements on weekends, alerting you to any changes in office hours in the upcoming week.

GSI: Jinge Wang (jinge@berkeley.edu), Office hours : TBD

Course Format

ME 132 consists of classroom lectures, weekly homework assignments, 1 midterm exam, a final exam, computer laboratory sections. Faculty instructor delivers lectures, while graduate student instructor (GSI) supervises laboratory/discussion sections.

I. CLASS/LABORATORY SCHEDULE

Four and half hours of lectures and one and a half hour of laboratory/discussion per week.

Lectures: Tu/Th, 12:30PM-3:00PM, Location: **108 Wheeler Hall**

Discussion Sectio sections: Fri 9:00 AM - 10:30 AM 10 Jacobs Hall

II. ASSIGNMENTS

(1) Homework

Homework will be posted on bCourses. No late homework will be accepted. More information about how/where to turn in assignments will be posted soon.

Homework solutions will be posted on bCourses after the due date. Graded homework will be returned in the next week.

(2) Laboratory Assignments

There will be short laboratory assignments every other week. **Reports will be due (submitted to bCourses) the following week. Late reports will be immediately subtracted 20% of the total points, and will keep loosing the same amount every six hours. Make sure to upload your assignments on time.**

III. MIDTERMS AND FINAL EXAM

Closed book, but sheets of notes are allowed, as described below

Midterm 1: Tuesday, July 3, 12:30-2:50 PM (in class). One sheet of handwritten notes allowed (both sides), plus calculator.

Final: Thursday August 15, 12:30-2:50 PM. Three sheets of handwritten notes allowed (both sides), plus calculator.

Course Text and Requirements

We will use PowerPoint slides and Control System Engineering by William J. Palm III.

There is a good book, "Feedback Systems", by Karl Astrom and Richard Murray. You can purchase the book, or obtain a pdf-version free-of-charge. Check the wiki for more information: **http://www.cds.caltech.edu/~murray/amwiki/index.php/Main_Page (http://www.cds.caltech.edu/~murray/amwiki/index.php/Main_Page)**

In ME132, we are going to use Matlab extensively, as well as learn how to use Simulink and the Control System Toolbox. The ME132 Laboratory (10 Jacobs Hall) provides computers with Matlab/Simulink and all relevant toolboxes. **We highly recommend that you install Matlab on your personal computer**, using the license available to all UC Berkeley registered students, which can be obtained at **https://software.berkeley.edu/matlab (https://software.berkeley.edu/matlab)**

Academic Honesty

It is acceptable to discuss with your classmates the material contained in the homework assignments, online-quizzes and laboratory assignments. *However, we require that your submissions represent your own work.* Copying someone else's work or allowing your work to be copied constitutes cheating, and will result in zero credit for the entire assignment. In addition, Berkeley students who are found to cheat in assignments or exams will be referred to Student Judicial Affairs. For details, see the website of the **Berkeley Center for Student Conduct (http://sa.berkeley.edu/conduct)** .

Honor Code
The student community at UC Berkeley has adopted the following Honor Code**: "As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others."** Your MechE 132 instructors join you in pledging to adhere to this code.

Grades and Grading

The course grade will be assigned based on the following percentages:

- 30% Homework
- 10% Laboratory Assignments

- 25% Midterm (July 3rd)
- 35% Final (August 15)

If you find any discrepancies between the issued grades and the grades posted on bCourses, please bring them to the attention of GSI immediately. In general, the course is curved, to College and Department guidelines, with a 3.0-3.1 GPA. I will say more about this in the first lecture.