UCLA
Dept. of Electrical Engineering
EE 133A: Applied Numerical Computing
Fall 2016

Lecturer:
Flavio Lorenzelli
Eng. IV 66-127C
email: lorenz@ucla.edu
office hours: MW 6-7pm, 66-124A Eng IV

Teaching Assistant:
Cameron Gunn
email: camerongunn@ucla.edu

Lectures:
Mondays and Wednesdays: 4:00am-5:50pm, Boelter Hall 2760

Course Description:
Introduction to numerical computing. List of topics:

- Vectors
- Norm, distance, angle
- Matrices
- Matrix inverses
- Orthogonal matrices
- QR factorization
- Linear equations
- Least squares
- Least squares applications
- Constrained least squares
- Cholesky factorization
- Nonlinear least squares
- Nonlinear equations
- Problem condition
- Algorithm stability
- IEEE floating point numbers

The webpage for the class can be found at: `https://ccle.ucla.edu/`.

Prerequisites:
EE 131A, and Civil Engineering M20 or Computer Science 31 or Mechanical and Aerospace Engineering M20. Working knowledge of Matlab is strongly encouraged.

Homework:
Homework and computer assignments will typically be distributed and collected every week.

Textbook:
"Vectors, Matrices, and Least Squares," by S. Boyd and L. Vandenberghe (available on CCLE).

Handouts:
Homework assignments, computer assignments, and other handouts will generally be available on the course web site.

Exams and Grading:
The midterm exam will be given on Wednesday, October 26, in class (closed book). The final exam will be given on Wednesday December 7, 11:30am–2:30pm. Final grades will be determined according to the following distribution:

Homework and Computer Assignments:	15%
Midterm:	35%
Final:	50%