



ME118/ME 218 N  
Spring 2025

## Introduction to Nanotechnology and Nanoscience

### Instructors:

- [Prof. Liwei Lin](#), Room 5135 Etcheverry, (510)643-5495, [lwlin@me.berkeley.edu](mailto:lwlin@me.berkeley.edu)
- Teaching Assistant, Jongha Park, [jonghapark@berkeley.edu](mailto:jonghapark@berkeley.edu)

### Class Meetings:

- *Lecture*, Tuesday and Thursday at 155 - Anthro/Art, 5:00 - 6:30pm
- *Office Hours*, Thursday 1-2pm
- *TA Office Hours*, Monday 5-6pm, Etchevery 1113

### Course Descriptions:

Nanofabrication technology (how one achieves the nanometer length scale, including "bottom up" and "top down" technologies), interdisciplinary nature of nanotechnology and nanoscience (including areas of chemistry, material science, physics, and molecular biology), examples of nanoscience phenomena (the crossover from bulk to quantum mechanical properties), and applications (from integrated circuits, quantum computing, MEMS, and bioengineering). Students are asked to read and present a variety of current journal papers to the class and lead discussions on various works.

**Prerequisite:** Chemistry 1A, Physics 7B,

### Text Books:

### Projects:

A small project abstract based on nanowires/nanotubes will be collected at the middle of the semester. A final project is required, including oral project presentation to be held at the end of the semester and a written report. For ME218N students, an additional requirement is to conduct numerical simulations for the final project.

### Grading:

- 25% homework, Lab & participation (assigned paper presentations)
- 10% small project (one-page project abstract based on nanowires/nanotubes)
- 30% 2 exams (10% Quiz I, 20% Quiz II)
- 35% final project (concept 10%, oral presentation 10%, written report 15%)

● [Class Schedule](#)

● [Selected Papers](#)