

## Eng 192 Syllabus

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This course is about the responsibilities and joys of teaching as an undergraduate mentor, with a focus on practical skills for engineering labs and office hours. The skills gained in assisting other students in technical matters will help you professionally because 1) facility in discussing technical topics differentiates students in job interviews and 2) in your role as a working engineer you will often be instructing other engineers in technical issues. If you are also playing a role in designing the projects to be used, the project management experience including all the logistics for enabling a class to succeed is prized by employers. However, the main reason to be a mentor is that is fun: helping other students brings rewards in and of itself.

The topics covered in the course are:

- The Basics
  - Why and how to be an awesome mentor, making students welcome, public speaking, lab section prep, one-on-one interactions
- Structure of Knowledge
  - How concepts flow into each other within and across courses; use of concept map for diagnosing and ameliorating student difficulties
- Fostering Student Learning
  - How students learn, how to encourage effective learning habits, barriers to learning + student support services.
- Inclusion and Decorum
  - How to be a role model for respectful and ethical behavior among diverse student populations; implicit bias
- Online Tools
  - Course management systems, forums, grading tools; managing expectations for online availability.
  - Remote labs and office hours
- Team Dynamics
  - Freeloading in group work and how to avoid it; detecting and reporting cheating
- Grading Technical Reports
  - Rubrics and style guides; how to grade quickly and fairly
  - FERPA
- Managing your Classroom & Emergency preparedness
  - Managing difficult students
  - Identifying and getting access to space
  - Classroom set-up (EH&S standards)
  - Safety (Standard Operating Procedures, SDS, etc)
  - What to do in case of emergencies
- Bonus topic: Organizing Design Competitions

Each unit will take the form of a brief lecture followed by an assignment. A second lecture will discuss possible solutions to the assignment.