ME 481 Fall 2015, Day 1:
Roll call
Syllabus
Jr/Sr Student Handbook

Lecture:

Project and course introduction (purpose and expectations)

- Purpose: better learn the design process by experiencing it.
- Finished product at the end of Spring: a "definition" of something you have designed. The definition will include:
  - some engineering drawings
  - a report,
  - potentially physical hardware that demonstrates the engineering principles (NOT a polished product ready for market).
- Expectations:
  - capstone is your chance to shine – take pride in what you do.
  - Attend class, let me know if you have to miss a class
  - COMMUNICATE with your team mates, me, faculty advisor, industrial advisor)and/or customer).
  - Keep abreast of requirements posted on the web page, and emailed.

Deliverables due next week (and for whole project).

- Next week – first weekly meeting minutes emailed to me and "CC" all stakeholders – see details below. Include selecting a web master, a "driver" (see University driving policy) and a team lead for ME481. Establish technical rolls for each team member - what is each person's primary technical responsibility on the project.
- Whole project deliverables, see syllabus

Roles of Industrial Advisors, Faculty Advisors (and all faculty), Instructor.

- Avoid the "I can do it all" philosophy! A BIG part of being an engineer is seeking help appropriately!
- Instructor (me): provide "managerial" framework – setting due dates, etc.
- Faculty advisors: provide technical or teamwork guidance – but usually, you have to ASK!
- All SSOE faculty: provide technical guidance – but usually, you have to ASK!
- Industrial Advisors: provide technical or teamwork guidance – but usually, you have to ASK! You will need to meet with your IA before the end of the month to determine what role they will play. Some may be very involved others not – but they are a RESOURCE for you!

Team work, communications, project management.
http://faculty.up.edu/lulay/MEStudentPage/ME-Student-Page.htm

- Often, students perceive many of the non-technical requirements for this project as "busy work." It AINT! Good communication, team work and project management is an investment and it takes energy/time.
- Team work skills:
  - Conflict management, allowing and encouraging all members to be active:
    - As a team, establish very clear short term (<1 week) tasks for everyone – keep an action item log which documents these.
    - Come talk to me if a problem persists or you need some help
  - We expect the teams to meet regularly, at least once a week
  - Purpose of meetings
- Communication:
  - knowing when to ask and how to ask
  - knowing how to listen
  - writing audience appropriate emails…no "hey Doughty…." – do check spelling, etc.

    - Reports, of course. Engineering drawings, analysis, testing…needs documented.
- Project management http://faculty.up.edu/lulay/MEStudentPage/ME-Student-Page.htm
    - What is PM, what's it's purpose?
    - Planning (defining requirements, establishing a time line, identify resources ($, shop, etc.)
    - Execution – communication, revision of plan, Action Items, Decision logs…

Budget issues and fundraising process

- **See Appendix B in the Jr/Sr Student handbook!!!!**

Introduction to the design process
*define the problem, figure out what questions you need to have answered to satisfy the requirements, answer the questions, done.