

21W.732 ASSIGNMENTS AND SCHEDULE, LATE-OCTOBERISH 2009

MOVIE ASSIGNMENT—if you have not done so, please turn in a 2nd draft of a movie essay. The literary analysis is preferred, but in the odd chance that you, the author, prefer, you may revise the essay that outlines your personal response.

TEAM/PROJECT II EXIT STRATEGY:

- Prototype—Build three prototypes of your solar energy harvester for demo in class on Oct 26. The prototypes will be tested during class on Wed, Oct 28 (sunshine permitting).
- Meet with Dave to review the proposal.
- The following Monday (Nov 3), both the oral and written reports are due. It is best if you can get your slides to Dave by Oct 29 so he can provide feedback.

READING:

- For Oct 28: *Should Ohm's Law be Repealed?*
- For Oct 14: from *The Existential Pleasures of Engineering*
- For Oct 21: *Who's a nerd* & the Boston Globe on MIT nerds

PROJECT III:

Conceive, design, prototype, and evaluate a device to reduce energy footprint.

THE PROJECT III DELIVERABLES ARE:

- 5 ~1 page evaluations of existing products: 3 good, 1 bad, and 1 “other” (due in class, Monday Oct 26)
- 3x3 matrices. three concepts and for each concept, three possible embodiments, for devices to reduce energy footprint. Each embodiment deserves a sketch and a simple FRDPARRC table. Document these concept/embodiments in your notebook and copy each embodiment sketch/FRDPARRC to a single piece of 8.5”x11” paper. Due in class, Wed, Oct 28
- Based on the brainstorming collaboration, expand the number of ideas. Again, document this in your notebook
- Winnowing: decide the criteria on which you will choose your concept. Tally. Pick. Document in your notebook
- Meet with Dave and Elizabeth
- Record meeting agenda and minutes—especially deliverables
- With the concept defined, brainstorm again to identify further embodiments. Again, this work belongs in your notebook. The FRDPARRCs should be detailed enough to help you decide on the feasibility of the embodiments. Analysis, more, more, more. References, especially not from wiki
- Plan your team’s end-of-semester workload. And your own
- Pitch your top three embodiments—presentation and graphics
- Choose one device to design
- Propose the design of this device. Include a detailed model, FRDPARRC, and design.
- Build a mock-up of your device
- Propose the testing of the device (each student must write an individual testing proposal and report)
- Prototype the device
- Test the device
- Report on the testing of the device (individual report, much of which is expected to be incorporated in the final report)
- Report (written and oral) the success of your endeavor

THINKING WAY AHEAD:

At the end of project III, expect two more reflection assignments:

- Write a myth about yourself (over the Thanksgiving day holiday weekend)
- Write three (~1 page each) parachute essays that explain how you work.

REMINDER:

No 21W.732 class will be held on Wed. Nov. 25, the day before the Thanksgiving holiday.