

## 20.1 Final Project

Monday, April 2, 2001

- This is the 'Project' in 'Project Lab'.
  - It is YOUR design.
- Work in teams of 2 or 3 persons.
- Staff will support and help as much as possible.
- Start NOW!
  - Most work is done after lab 3 (and other work) is completed.
- Demonstrations last week of term.
- 6.905 makes 6.111 an 18 unit subject.
- Prizes...

## 20.2 Procedures

- 1. Form project teams.
  - Generally 2 people
  - Sometimes 3
  - If you want to work alone... Don't!
    - Experience is that it almost always works badly.
    - Teams really can get more done.
  - But, your team should be folks you can work with.
    - Help each other by checking each other's wiring, vhdl code, etc.
    - Help each other by trying to figure out bugs.
- 2. Decide what to build. Your project
  - Should DO something.
  - Have some unique feature.
  - Be visually or aurally appealing.
  - (Working projects will be videotaped!)
- 3. Write up proposal abstract.
  - Convenient form is last page of project info handout.
  - We will use this to map project teams to project TAs.
- Steps 1, 2 and 3 should be done this week (Wednesday).

## 20.3 Procedures (continued)

- 4. Write the proposal itself.
  - Description in words
  - Block diagram of major parts
  - Specifications: what will it do?
  - Division of responsibilities
- 5. Proposal Conference
  - Schedule with your project TA.
  - Bring proposal material.
  - Expect pointed discussion.
- 6. Detailed Design
  - Based on Proposal and Proposal Conference
  - Wiring Diagrams and Source Code
  - Supported by Design Conferences
  - Must be done before construction begins
  - Design Presentations -- scheduled at class hours

## 20.4 Procedures (continued)

- 7. Construction
  - Prerequisite: everything else done - don't work on anything but the project.
    - Labs 1, 2 and 3
    - All homework
    - Detailed design (step 6)
- 8. Demonstrate
  - Typically during last week of term
  - (Earlier is OK!)
  - Working projects will be videotaped
    - Unless you decline!
- 9. Report
  - A formal report is required as described in Report Guide.
  - Report may be prepared jointly with individual sections identified.
  - Deadline: The last day of classes!
- You MUST build a project and turn in a report in order to pass 6.111.
  - That is not true of other 6.111 assignments.

## 20.5 Extra Units

- Adding 6.905 makes 6.111 an 18 unit subject.
  - Your project does NOT have to be extra large.
  - 6.905 earns 6 Engineering Design Points.
    - But 6.905 doesn't satisfy any other requirements.
- Grading:
  - Registration for 6.905 is not considered when 6.111 grade is determined.
  - 6.905 grade is then the 6.111 grade.
- Requirements:
  - Must be on schedule, i.e., done with lab 3.
  - Must have detailed design done and be ready for construction.
  - Must have all of this done one day before drop date.
- Paperwork:
  - Get your Project TA to sign the form (penultimate page in project info) to certify that you have met the above requirements.
  - Present this form and add card to Troxel, who will sign as 'instructor'.
    - You need NOT submit a copy of your proposal (even though the form says so).
    - Prof. Troxel will not be at MIT the day of drop date.
  - Your advisor must sign the add card (before or after Troxel signs it) and you must deliver the signed add card to the registrar by drop date.
    - BEWARE! Sometimes people in the registrar's office think drop date is for dropping only and don't want to take an add card. Insist on leaving it. It really does work for 6.905!

## 20.6 Prizes

- George C. Newton Prize
  - Best Undergraduate Project Lab in Course 6
  - One per year
  - Not always, but usually, won by a 6.111 project
- Bell Northern Research Prize
  - Best 6.111 project
  - One per term
  - => You can't win both BNR and Newton prizes. <=
- Prizes (including money) are awarded at the annual departmental spring party.
  - Don't worry. I'll make sure the winners know ahead of time.

## 20.7 Summary of Dates

Formation of Project Teams	ASAP
Project Abstracts	4 APR (Wed) (at lecture)
Proposal Submission and Conferences	9 APR (Mon) (for a week)
Block Diagram Conferences	18 APR (Wed) (for a week)
Design Presentations (34-101)	25, 27, 30 APR and 2 MAY
Deadline for 6.905 form signing	25 APR (Wed)
Deadline for 6.905 add card delivery to the registrar (drop date)	26 APR (Thurs)
Demonstration	14, 15, 16 MAY
Videotaping (optional)	16 MAY (Wed)
Reports Due in lab by 5 PM	17 MAY (Thurs)

- Sign up sheets will be posted on each TA's office door.
- All project teams CANNOT sign up for the last day!
- Schedules for the design presentations will be determined by the 6.111 staff.
  - Not presenting your project design will lose you points.