ECE496 Design Project
Next Semester’s Deliverables
(& December Review)

Thursday, Nov. 16, 2017

Agenda
1. Testing Notes
2. December review
3. Progress report / progress review
4. Oral Presentation
5. Final Report
6. Design Fair
7. Leftovers

ECE496 Roadmap, Milestones & Deliverables

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<tr>
<td>Registration &amp; background research</td>
<td>Project Proposal</td>
<td>Final version</td>
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<td>Design Review meeting</td>
<td>Individual Progress Report</td>
<td>Oral Presentations (in tutorials)</td>
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<td>Design Goal</td>
<td>System Requirements &amp; Design</td>
<td>Design &amp; Test Modules</td>
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<td>System Integration &amp; Testing</td>
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Testing – What are you aiming at?

- Proving that you have done the project as claimed.
- Typically: 30-40% of the time is testing in industry (only 20-30% is coding/detail design)
- In mission-critical situations and financial software this can rise to 90-99%
- Look at tests of boundary conditions, error conditions (not just “test for smoke”)
- The money criterion: Would you bet your own money that the design is working the way you claim? How much? At what odds??

December Review

- Different schedules for every section: Watch your email
- **Bad**: Nothing much to report from time of proposal
- **Good**: Progress made
- **Best**: Do a show and tell – working code, user interface (layout only, perhaps), circuit on a proto board, etc. of a **significant** part of your project.

- Not marked; to leave a good impression only
  - Bring a test procedure
  - Follow up on deliverables from Design Review

Where are the hurdles in your Project?

You can waste a lot of time convincing yourself that creating a github repository, designing a database structure, creating a development environment or other less-difficult issues are significant progress.

But what are the things that keep you up at night (when you think about the project)? Direct your efforts to them. Start to solve these problems as soon as you can.

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1. Testing Notes
2. December review
3. **Progress report / progress review (Jan)**
4. Oral Presentation
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Big Mistake – Are you making it?

Some teams go from "deliverable" to "deliverable". THIS IS NOT GOOD.

You have a project to do. If you aren't spending considerable time on your project because nobody is making you do a quiz or a lab or submit homework….

You will not do well.

Individual Progress Report/ Progress Review

- Progress report (due Tue Jan 16)
  - marked by administrator
- First term progress review by supervisor

Individual Progress Report

- A group progress summary plus individual reports
  - Group Progress Summary
    - (Test Information In appendix)
  - Individual reports (for each student)
  - What you have accomplished since the Design Review?
Hints for the Progress Report

- Update on accomplishments (completed & underway)
  - Must be supported by tangible evidence or documentation
- Indicate problems you’ve encountered and overcome through your creativity and hard work.

This is why you have been told repeatedly to have an engineering notebook!!!!

- Expand your verification matrix to fit your design and start to include details of the test
- FIX THE PROBLEMS FROM THE PROPOSAL (or continue to lose marks for the same things)

Ece496 alumni tips:

Keep an “evidence trail” on the work you do. We took too much time on our progress reports because we had to recreate evidence and remember what we had done.

— Ted Herman

Writing vs. Communication

This is not about writing. This is about communication.

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Oral Presentation

- 2 Evenings (Tue or Thu)
  - (You will be given dates – if problems, say right away. If other things come up, get the other things moved)
- Evaluated by administrator and CI but unmarked dry run
  - THEN
- Marked final presentation
  - (by administrator)
- Bring your own laptop
- Presentation length depends on team size
  - Team of 2 – 11 minutes
  - Team of 3 – 14 minutes
  - Team of 4 – 17 minutes
- Questions from audience in final presentation

Grading session

Practice run

ECE496 Roadmap, Milestones & Deliverables
Final deliverables worth more than one course …

- Project Proposal: 15%
- Design Review: 8%
- Individual Progress Report & evaluation: 15%
- Oral Report: 5%
- Final Report: 35%
- Design Fair: 22%

Supervisor: 50%
Administrator: 50%

Leveraging your past work

Preparing your final report, poster, and demo from the start

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<td>Background and Motivation</td>
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<td>Project Overview</td>
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<td>Project Requirements</td>
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<td>Testability and Acceptance Test</td>
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<td>Technical Design</td>
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<td>Hardware Devices and Design Alternatives</td>
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<td>System architectural view</td>
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<td>Detailed flow descriptions</td>
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<td>Assessment of Proposed Design</td>
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<td>Testing and Verification</td>
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<td>Software implementation (WSDL)</td>
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<td>System Install Plan</td>
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<td>Financial plan</td>
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<td>Testability Assessment (resources, results)</td>
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Key additions
- Documentation and assessment of final design
- System testing and results
- A clearer, better articulated goal and requirements (?)
Accomplishments need to be concrete, tied to goals and requirements
The report is a shared, team responsibility
- everyone contributes and makes clear which portion they write
Generous use of Diagrams!!!! Tables!! Lists!!!
Follow final report guidelines

Final (Group) Report

- Due before the Design Fair

Show you have followed the plan and reached the goal, satisfied the objectives and delivered the deliverables

Tell us what the problems were!
- Be honest, don't pad
  - administrator and supervisor familiar with work, just need to know what you finally accomplished

Final Group Report

- Key additions
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Design Fair Nights (Tue-Thu, Apr. 3-5)

Final Design Showcase (Fri Apr 6, 12-2:30pm)

Design Fair

Components
1. Poster
2. Presentation / Demo / Questions

Your message to visitors:
"Here is the problem and why it's important. Here is what we accomplished, and proof that it works."
Preparing a Design Fair Demonstration

- Think through its impact on a visitor
- Provide a fluid connection to the poster
- Highlight accomplishments
- Leveraging past work
  - Review the acceptance test from your Project Proposal
- Consider both live, recorded and static or constructed demonstrations

What will you need in terms of resources to do this?

Resources for the Design Fair

- Some stations are simply a table (i.e. without a power outlet, network connections, computer, etc.)
- If your demonstration requires special equipment or facilities, you must notify Mike Mehramiz

Design Fair – grading

- Supervisors often grade outside the Design Fair to have more time to better assess what you finally accomplished
- Your individual grade from the administrator will be based on the following criteria:
  - the quality of the poster
  - the ability to explain your work
  - the ability to provide correct responses to questions posed by the administrator
  - project progress and complexity
  - a successful demonstration

Time Conflicts (Oral Presentation or Design Fair)

If your presentation conflicts with evening midterms or other courses:
  - If partially overlapping, group usually presents after the test/event
  - Ask instructor of other course to move the test date or allow you to write your test earlier
  - Inform your administrator as soon as possible!
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**Awards / Programs**

- Gordon Slemon Design Award ($1000)
- CNIB Hochhausen Prize ($1500)
- Centennial Thesis Awards (2: top CPE & top ELE)
- Certificates of Recognition/Invitation to Final Showcase

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**Many students get jobs based on their project!**

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**Claiming Project Expenses**

- All expenses must be based on the budgets that were submitted, reviewed and approved by teams.
- Original receipts required
- Some Items purchased with support from us to be returned as indicated in initial approval of request
- Additional instructions on “How to Claim” Funds to be posted. See ‘Budgets & Funding Requests’ page

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**Updating your project profile**

- Keep your project title and description up-to-date
- Must be done by team creator
To do Checklist

To do:
- Complete online safety training
- Submit Ethics review if required
- Keep an engineering notebook, an 'evidence trail'

Questions......