Instructions and Guidelines for Final Report and Final Presentation (Revised 04/23/07)

55:089
EE Senior Design
Spring, 2007

Final Report Format

• Cover page
  – title
  – author
  – partner(s)
  – abstract

• Introduction
  – need/rationale
  – previous work by others (if applicable)
  – brief summary of project
  – description of customer
Final Report Format (Continued)

- **System Requirements**
  - What is the system supposed to do
  - What are the quantitative and qualitative performance objectives
  - What constraints does the system need to satisfy—specifically comment on economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
  - Customer requirements
    - Comment specifically on how this project has contributed to your perspective on the need for lifelong learning in the practice of engineering
    - Identify contemporary issues you had to deal with during this project
    - What is the impact of your design in a global, economic, environmental, and societal context

Final report Format (Continued)

- **Architectural Overview**
  - system level (block diagram) view of your design
  - technology choices and rationale
  - relevant standards
- **Detailed System Design**
  - Description of design
  - discussion of major design tradeoffs and/or decisions
  - diagrams, schematics, etc
  - test procedures
Final Report Format (Continued)

• Results and Conclusion
  – report on level of success in achieving objectives
  – reasons for shortfalls
  – lessons learned

• References
  – relevant books, periodicals, web links, etc referenced in the report

What is a Requirement?

• A requirement is a statement about **what** the system should do.
• A requirement may be a statement about an important constraint that the system must satisfy
• A requirement is **not** a statement about **how** the system is implemented
Requirements Examples

• Which of these are valid requirements:
  – The system shall have a range of 300 meters.
  – The system shall run on a Window XP platform
  – The system shall be coded in C++
  – The system shall use a QJD 1000 microcontroller to interface with the pressure sensor.

Final Report—Additional Guidelines

• Each team should submit one final report
  – The report should describe each team member’s specific contribution to the overall project
Final Report—Additional Guidelines (Continued)

• Report Format
  – 10 pages maximum
  – double-spaced, 12 point font
  – lengthy documentation such as program code listings can be included as an appendix and is not subject to the 10 page limit.
  – Report should be written in the third-person
  – The tone of the report should be professional
    • proper grammar and spelling
    • avoid slang, contractions, and informal language

REMINDER:

Projects must address the use of appropriate engineering standards and include consideration of realistic constraints, as appropriate:

- economic
- environmental
- sustainability;
- manufacturability
- ethical
- health and safety
- social
- political
Final Report Submission

• Final reports *must* be submitted electronically
• Follow the submission instructions provided on the class web page
• Final reports are due by 11:59 p.m. on Tuesday, April 24

Final Presentations

• Final Presentations Dates (in-class):
  – Final Presentations to the DRB will take place during the last week of the semester. Tentatively, the presentations will be on:
    • Tuesday, May 1, 2:30-3:20 p.m.
    • Thursday, May 3, 2:30-3:20 p.m.
    • Changes in the presentation times may be necessitated by the schedules of DRB members.
• One presentation per project
  – 10 minutes, 7 for presentation, 3 for set-up, questions, etc.
• Time limits will be *strictly* enforced
Final Presentations (Continued)

- All team members must be involved in the presentation.
- Format:
  - Introduction and general overview of system requirements and architecture by designated team member.
  - Presentation by each team member on their portion of the project.
- Presentation organization should generally correspond to that of the final report.
- Final Presentations will be rated by the DRB. Other interested parties may be invited as well.

Final Presentations (Continued)

- PowerPoint slides for final presentations MUST be submitted electronically no later than 9:00 a.m. on Tuesday, May 1. The slides must be e-mailed to: kuhl@engineering.uiowa.edu
Additional Details

• The presentation order for the final presentations will be posted on the class website no later than Wed., April 25
  – Any team that wants to volunteer to present on the first day (Tuesday, May 1) should contact the instructor no later than Tuesday, April 24
  – Anyone who cannot be present for the presentations on Thursday, May 3 due to a conflict must inform the instructor of this fact by Thursday, April 25

• The instructor and TA will arrange separately with each team for a demonstration of the final project sometime between May 1 and May 8.