

The Challenge Design Exercise (CDE) RSS Spring 2013

The Challenge Design Exercise (CDE) is an opportunity for you to think individually about design before you begin to work with a group. We accept that you will not be able to produce a complete design. Rather, we ask you to consider what you know and what you need to learn, anticipate problems, and generate questions for exploration as the term proceeds. Then, write a brief document describing your assumptions, your approach, and your design choices in as much detail as you see fit.

Audiences:

This document is to be written for yourself, your instructors, and (eventually) your team.

Purposes:

This document has several purposes:

1. To get you thinking about the technical attributes of your design;
2. To begin a planning process for how to accomplish it;
3. To help identify aspects of the Challenge which you don't yet know;
4. To anticipate problems you may encounter; and
5. To help your instructors assess your knowledge, thinking, and writing.

Outcomes:

A successful document will provide a concrete way to share ideas with your teammates. It will give your instructional staff a realistic indication of your technical and writing needs. Finally, it will help you clarify your goals for the class, including skills to develop and strengths you bring to your team.

Essential Structure (you may add sections as needed):

- Problem statement
- Your assumptions
- High-level description of your approach
- System block diagram (modules, inter-module connectivity)
- Description of each essential module
- Milestones and implementation plan
- Conclusion

Specifications:

- Due Sunday, February 10, at 11:59 pm
- Individually written
- Should be about 5-7 pages
- Figures as needed, each numbered and labeled
- Each section formatted with a section heading
- Each page with a footer containing name, date, and page number
- Submitted filename named as: Firstname_Lastname__CDE.pdf
- Turn-in instructions TBD (do not email as attachment)

Resources:

- RSS Course Challenge description from 2012
- Syllabus with list of lab exercises
- Lab assignments from previous years