

Capstone Design: Revised Design and Work Report Assignment

Revision 0.0, 22 Nov 2011

This report has two fundamental purposes:

1. to communicate your project's updated design, reflecting changes you have made due to Critical Design Review (CDR) feedback (including those arising with respect to mandated project scope modifications). This will include an updated project schedule (including milestones) relating project status and an updated project budget; and
2. to outline the work that each individual in the group has performed since the CDR presentation.

If a design proposal document had been required by the course, a significant portion of the report addressing the first purpose, above, would be analogous to an updated design proposal. Since the current academic year did not require a design proposal document, however, it follows that a potentially significant portion of this report will be generated from your CDR presentation content: this is expected and encouraged. Updated information, of course, will require modifications to be made.

The Audience

The target audience is your peers. Do not count on the reader having been present at your CDR presentation. Conversely, it is not necessary (or desired) to describe the design changes in a fashion that they are separable from the original design. Instead, please describe the updated design as it stands at the time of writing, and not the “adventure” on the path to your revised design.

Design Description

Please refer to the Critical Design Review Assignment for a description of aspects of the design to be sure to include: introduction, background information, block diagram, schematics, schedule, budget breakdown, etc. Please also be sure to describe, potentially at a level of abstraction, firmware or software design. The status of the project should be apparent, likely via discussion about the project development schedule. This documentation will conceivably be more verbose than that shown during the CDR presentation.

As with the CDR materials, by the end of this portion of the document a reader should understand how your project works, and be able to “manufacture” the design without any consultation. In most cases, however, the discussion can be at a somewhat abstract level for software and firmware portions of the design. (Software-oriented projects, though, would require more detail to remain commensurate with other groups' work.) Further, and as already outlined, the status of the overall project's development should be communicated.

Work Report

By reading the work report portion of the document, it should be apparent to the reader what work the individuals in the group have completed (or are in the process of completing) since the CDR presentation. This could be equated to having a formalized summary of each individual's laboratory book records. This may contain, for instance, test results, code snippets, etc.

Please partition this portion of the document such that there is a section corresponding to each individual. Each section should be written by the reporting individual, since a portion of evaluation of this entire document is attributable to the reporting individuals, as described below. Proofing of this section by other members is acceptable and good practice.

Submission and Document Format

Please format your document in a manner that is consistent with good technical documentation: your ECE200 notes/text will likely help with this. Please use letter-sized pages. There is no page limit imposed for this document, but please keep your documentation concise.

Please submit a *single* PDF file by 4PM on the date noted in the syllabus via the course submission facility, located at:

<https://ee401imgsvr.ee.ualberta.ca/submission>

This is a group submission (although with a portion individually graded, as described elsewhere), and therefore only one group member needs to submit on behalf of the group. As per usual, later submissions overwrite those made earlier. An email including the file is sent back to the group as an acknowledgement of receipt - be sure to check this file.

Grading

The rubric-oriented grading scheme is appended. Please review this carefully. Note that the rubrics need not (and likely should not) represent an outline for your document. The rubric is partitioned into a portion attributable to the group work (corresponding to the design description) and another to individuals in the group (corresponding to the individualized sections of the work report portion).

Marks will be corrected according to the method outlined in the syllabus, although in a piecemeal fashion. The method that a mark is assigned to an individual is described here:

1. The group grade (corresponding to the design description) is corrected to a class-wide average and standard deviation.
2. The individual work description grades are, separately, corrected to a class-wide average and standard deviation.
3. An individual's mark is calculated by weighting these two components according to:

Component	Weighting
Corrected Group Mark (Group)	0.75
Corrected Work Description Mark (Individual)	0.25
TOTAL (Individual)	1.00

Revised Design and Work Report Evaluation (Group Evaluated Portion)

Current Revision: 0.1 Revision Date: November 23, 2011 Academic Year: Group:

Criteria	Level				
	N/A Score:	Limited 0	Adequate 1	Proficient 2	Excellent 3
Introduction					A general Introduction provides a clear overview of the purpose and motivation of the design.
Specifications					Target specifications are outlined. Technical content demonstrates that the specifications are theoretically addressed by the design.
System Block Diagram					A correct, clear, complete, system block diagram is provided.
Background Information					Appropriate background information to orient a reader (a peer) is provided.
Schematics/Engineering Drawings					Complete, accurate, readable, and conventional drawings are included. This may include schematics, flow, and mechanical diagrams, for instance.
Development Schedule and Project Status					An up-to-date schedule of project development is included and describes sequence, responsibilities (resource assignment), and milestones. The schedule is detailed and achievable. Milestone evaluation method is described (an outline of tests to be performed, for instance). The current state of the project is clearly related.
Project Budget					An up-to-date budget is provided, is comprehensive, accurate, and reflects the current financial status of the project.
Technical Discussion					Accurate, insightful technical discussion is provided where warranted. (See also Readability/Flow, below.)

Revised Design and Work Report Evaluation (Group Evaluated Portion)

Current Revision: 0.1 Revision Date: November 23, 2011 Academic Year: Group:

Criteria	N/A Score:	Limited 0	Level Adequate 1	Proficient 2	Excellent 3
References and Citations					The IEEE reference and citation format is used, all source information is complete, all references are cited, sources are reputable, and citations are relevant.
Grammar		Grammatical errors compromise meaning. Extensive further document revision is recommended.	Grammar errors are distracting. Further proofing of document is recommended.	Minor grammatical improvement is possible.	No grammatical errors are found.
Conciseness					The document is neither overly verbose, nor lacking appropriate information.
Readability/Flow		Drastic modifications to document organization are deserved and/or figures are illegible.	Document flow could be improved and/or figures are missing captions or are unclear.	Minor improvements to document flow would help the reader and/or minor modification to a figure is desirable.	The document has excellent organization and is straightforward to read and understand. All figures are clearly labelled, captioned, and are of appropriate size and clarity.

Summary

Score		Max		Percentage	
	/		=		%
(Corrected and carried with a weighting of 0.75 toward the overall mark assigned to an individual.)					

Revised Design and Work Report Evaluation (Individual Evaluated Portion)

Current Revision: 0.0 Revision Date: November 22, 2011 Academic Year: Individual:

Criteria	N/A Score:	Limited 0	Level Adequate 1	Proficient 2	Excellent 3
Grammar and Presentation					Document portion is exceptionally well-written and professionally presented.
Development Progress					Progress made toward the project objectives is above-and-beyond. This aspect of evaluation is potentially evaluated with respect to the project schedule.
Conciseness/Audience					Document is written in a fashion that allows a busy supervisor (with general knowledge of the project) to gain insight into the individual's activities. Content is concise and highly relevant.
Accuracy					The information provided in the document regarding activities taken in project development is known to be accurate. Verification through demonstrations, etc. may be requested.

Summary		
Score	Max	Percentage

(Corrected and carried with a weighting of 0.25 toward the overall mark assigned to an individual.)

Comments: