Mid-trimester Assignments

Progress report – Group Component 15%

This assignment's purpose is to document progress halfway through the project. Your group must produce appropriate documentation for an engineer (in your field) so that they can critically appraise your design and initial progress and plan for the second half of the trimester. It will also provide documentation for the student-led design review.

We (the academic team) do not prescribe what that includes. Based on what you learned in ENGR301 and your other experiences, it is your job as a team to use appropriate documentation so that an informed engineer will understand what you have done and what you plan to do and that this will fulfil the product's requirements. Remember to describe the requirements in the report and describe where they have changed since the requirements analysis report.

This report will also be given to other students for critical evaluation. Note that the grade for the progress report will be independent of the other students' feedback.

There is no maximum/minimum length for the report. It depends on the teams work and the documentation style you choose. Your job is to produce a clear report, which concisely and appropriately informs the engineer (i.e. other ENGR302 students) about your progress and plans.

Note the marking scheme is very similar to the ENGR489 preliminary report.

Marking Scheme with indicators:

Introduction (3%)

Traits	Excellent	Good	Satisfactory	Unsatisfactory
Motivation	Provides insightful background information that illuminates the "big picture" and relevance of the project	Provides relevant background information which partially helps clarify the "big picture" and relevance of the project	Provides relevant background information but the link to the "big picture" and relevance is unclear	Non-existent, incoherent, or irrelevant motivation.
Problem statement	The problem has been identified and stated clearly with concrete evidence to demonstrate its existence	The problem has been identified and stated but the evidence to demonstrate its existence is insufficient.	The problem has been identified and stated but no evidence is presented to demonstrate its existence.	Non-existent, incoherent, or irrelevant problem statement

Background research (5%)

Traits	Excellent	Good	Satisfactory	Unsatisfactory
Literature review	State-of-the-art and existing solutions to the problem, including their advantages and disadvantages, have been stated. Concepts and other theoretical underpinnings of the problem/solution are discussed thoroughly and clearly.	State-of-the-art and existing solutions to the problem have been stated. Their advantages and disadvantages are sometimes mentioned. Concepts and other theoretical underpinnings of the problem/solution are discussed with some clarity and might lack elaboration.	State-of-the-art and existing solutions to the problem have been stated. Not much discussion on their advantages and disadvantages. Concepts and other theoretical underpinnings of the problem/solution might be presented.	Non-existent, incoherent, or irrelevant discussion of the state-of-the-art and existing work. Non-existent, incoherent, irrelevant, or questionable discussion of the concepts or theoretical basis of the problem/solution.
Tools and methods	Identifies relevant programming languages, hardware and/or software libraries, frameworks, development kits and tools that may be used in the development, with critical discussion on how these tools will benefit the development process.	Identifies mostly relevant programming languages, hardware and/or software libraries, frameworks, development kits and tools that may be used in the development with some discussion on how these tools will benefit the development process.	Identifies programming languages, hardware and/or software libraries, frameworks, development kits and tools that may be used in the development without much discussion on how these tools will benefit the development process. There are obvious	Non-existent, incoherent, or limited discussion of the tools to be used in the development process. Non-existent, incoherent, or limited discussion of the methodology. Justifications, if any, are questionable.

	A development process has been selected, with relevant justifications for the choice of the methodology.	A development process was selected, with somewhat relevant justifications for the methodology choice.	omissions in the presentation. A development process has been selected, with weak justifications for the methodology choice.	

Development progress (7%)

Traits	Excellent	Good	Satisfactory	Unsatisfactory
Requirements	Requirements specification is consistent and complete, covering all aspects of the system that need to be developed. They have been updated and further discussed since the requirements analysis assessment.	Requirements specification is mostly consistent, but a few minor aspects are either missing or unclear. Although it might be limited, they have been updated and further discussed since the requirements analysis assessment.	Requirements specification is vague in some instances, and there are key aspects missing or unclear.	Non-existent, vague, irrelevant, or inconsistent requirements specification.
Design	Thorough explanation of the system architecture, along with its components and interfaces with external systems. Requirements and constraints are used appropriately to drive design choices. Tests have been made to ensure the design is feasible. This might take the form of an early prototype.	Adequate explanation of the system architecture, along with its components and interfaces with external systems. Requirements and constraints are used appropriately to drive design choices most of the time.	The system architecture, along with its components and interfaces with external systems, are explained, but some key details are missing. Some of the design choices are driven by requirements and constraints.	Non-existent, vague, or irrelevant discussion of the system architecture. Non-existent or weak evidence that the design is based on the requirements specification, including unjustified design decisions that contradict requirements.

Deadline: 16/08

(Only one submission per group is necessary. You must have the group letter, e.g. Group A, on the title page.)

Design review – software project (Karsten)

Each student will be given another group's progress report. Your job is to appraise the report critically.

It is especially important to evaluate the alignment of the design with the requirements.

The appraisal should include:

- Areas of strength in the report.
- Questions that you have after reading the report.
- Comments on lacking/missing information.
- Suggestions for improvements.

Your role is to be a critical friend who provides feedback in a workplace. It is important to write the review in a positive and professional tone.

Also, remember that you will receive similar feedback from other students, so write it in a way you would be happy to receive the feedback.

The design review is expected to be no more than one A4 (although it can be longer if necessary.)

The academic team will mark these.

Marking Scheme with indicators:

- A-range: (10%-8%)
  - Provide good, understandable feedback with appropriate suggestions for improvements.
  - Written in a positive, professional tone.
- B-range: (7%)

    - Provide some appropriate feedback, although some important feedback might have been missed or might be difficult to understand in the report's context.
    - Written in a positive, professional tone.
- C-range: (6%-5%)
    - Provides superficial feedback. There might be some issues with the feedback.
    - Or, might be written in an unprofessional manner.
- D-range (4%)
    - Inappropriate or seriously lacking feedback.
    - Or, seriously inappropriate or unprofessional feedback.
- E-range (3%-0%)
    - No real feedback is provided.

Deadline: 04/09

Design review – hardware projects (Chris)

Each student will be assigned another group's design documents to review. You will need to capture possible design issues in writing, and then take part in a face to face design review meeting. The goal of the exercise is to improve the designs, so a friendly and constructive approach is expected.

Detailed design documents are not expected at this stage, so concentrate your design documentation and feedback at the system architecture level. It is fine to present detailed design documentaiton for review if you wish, but concentrate primarily on the high level aspects of your design. Consider physical, electronics and software architectural issues, as well as general operating principles and any fault tolerance strategies.

Your contributions to the design review process will be marked by the academic team.

The marking scheme with indicators is as follows:

- A-range: (10%-8%)
    - Provides insightful feedback, with appropriate suggestions for improvements.
    - Maintains a constructive tone throughout the design review process.
- B-range: (7%)
    - Provides some appropriate feedback, although some important feedback might have been missed, or might be difficult to understand.
    - Contributes to discussion of own design.
    - Maintains a positive tone throughout.
- C-range: (6%-5%)
    - Provides only superficial feedback.
    - Does not significantly participate in answering questions about team's design.
    - Might become overly defensive or aggressive during the review.
- D-range (4%)
    - Inappropriate or seriously lacking feedback.
- E-range (3%-0%)
    - No real feedback is provided.

Deadline for written report: 04/09

f2f sessions will be announced close to the session

Individual reflective report – 15%

This should consist of three specified main components:

1. Description of your contribution within your group.
    1. How did you structure the group and what is your role. Has it worked?
    2. Make sure it is consistent with the group progress report. The best way to ensure this is to reference what you have done to the group report.
2. Reflection on your contributions (approach/tools/etc).
    1. Describe the positive and negative aspects of working on your contributions.
        1. What went well?
        2. What would you have done differently, knowing what you know now?
    2. What have you learned?
        1. What will you do differently in the second half of the project?
        2. What has changed your perspectives on project work?
        3. What did you learn from the design review?
    3. Your individual plan for the second half of the project

3. Reflections on what you learned from the design review.
    1. What changed in your own project?
    2. What are your group doing well?

There is an old management ethos that if you haven't made a mistake, you haven't been working. What is important is to be aware of and learn from the mistakes.

Furthermore, we know you are a student, and this is probably the first time you are doing a large-scale, mostly self-directed, project. We expect you have made mistakes or done things less efficiently than you would have liked to.

In that light, it is important that your individual reflections show critical awareness of your own mistakes and what you are learning.

If you truly believe you have performed without any mistakes (how unlikely that might be), then your reflections need to include thoughts about how you think that was possible.

The individual report is expected to be one to two A4 pages, although it can be longer if necessary. It is important to avoid repetitions.

Marking Scheme with indicators:

- A-range: (15%-12%)
    - Clear, concise description of contribution. Including alignment with group report (e.g. using reference).
    - Critical reflections, including what has been learned for the future. (Especially important at the high end of the grade.)
- B-range: (11%-10%)
    - Clear description of contribution.
    - Some reflections, with limited critical thinking or alignment with contributions.
- C-range: (9%-8%)
    - Some description of contribution.
    - Limited reflection.
- D-range (7%-6%)
    - Poor descriptions of contributions.
    - Reflection might be entirely inappropriate to the context.
- E-range (5%-0%)
    - Hardly a report. Entire areas/components are missing

Deadline: 13/09