Grade | |

University of Puerto Rico, Mayagüez Campus
Electrical and Computer Engineering Department
ICOM 5047/INEL5195 – Design Project in EE and CpE

ORAL TEST "HAPPY HOUR" 1 EVALUATION – DETAILED DESIGN

Date	
Student's Name	
Team Name	
Project Title	
Module(s) that student designed	

Exam Protocol:

The group off students working on a particular project will be present during the oral exam. If a student is absent without a reasonable excuse, the grade of this student is zero (0). If excused, arrangements will be made with all the examiners.
The exam starts with the Project Manager explaining the status of the project and discussing the Gantt chart. This chart must be up to date. Every student is evaluated individually. The rest of the students must wait outside the lab. At the end of the exam, all students reconvene and get feedback.

Documentation (30)

- Documentation is correct, appropriate, and supports the design.
- No documentation supporting the design (-30)
- Documentation is not appropriate (not completed) (-25)
- There is documentation but it is flawed. Badly designed. (-20)
- Student presents documentation but not in a professional manner (-15)
  - ☐ Flowcharts, class diagrams, and any other software or firmware diagrams, as well as hardware schematics must be done using a CAD program. Hand drawn diagrams are not accepted. Must follow standards and conventions.
- If the student is designing software,
  - ☐ He/she did not present the use case diagrams (if applicable) (-15)
  - ☐ He/she did not present the class diagrams (if applicable) (-15)
  - ☐ He/she did not present the sequence diagram (if applicable) (-15)
  - ☐ He/she did not define the interfaces (if applicable) (-15)
  - ☐ He/she did not show the flowchart (if applicable) (-15)
  - ☐ He/she did not show other important design diagrams (if applicable) (-15)
  - ☐ The use case diagrams are inadequate (if applicable) (-10)
  - ☐ The class diagrams are inadequate (if applicable) (-10)
  - ☐ The sequence diagrams are inadequate (if applicable) (-10)
  - ☐ The interfaces are inadequate (if applicable) (-10)
  - ☐ The flowcharts are inadequate (if applicable) (-10)
  - ☐ Other necessary design diagrams are inadequate (if applicable) (-10)
  - ☐ The ER diagram is missing (if applicable) (-15)
  - ☐ The ER diagram is not correct (if applicable) (-10)
- If the student is designing firmware, he/she did not show the flowchart (-15)
- If the student is designing firmware, the flowchart is inadequate (-15)
- If the student is designing hardware,
  - ☐ he/she did not present global detailed hardware schematics (-15)
    - Input – Output signal levels
    - Bias and Interfacing

        - Power (consumption/management if applicable)
        - Impedance matching (if applicable)
        - Telemetry (if applicable)
    - ☐ He/she did not present detailed module hardware schematics (-15)
    - ☐ He/she presented inadequate global detailed hardware schematic (-10)
    - ☐ He/she presented inadequate detailed module hardware schematics (-10)
    - ☐ He/she did not present documentation for components selected (-5)
    - ☐ He/she did not consider different alternatives for the design (-10)
        - He/she did not present alternatives analysis documentation (-5)
- If designing human-machine interfaces, does not present mockups, Human-Machine Interfaces (HMI) diagrams, or views of User Interfaces and flowcharts of interactions (-15)

Specifications (30)

- Student's part is correct in specifications with proposal, alternatives, standards, and scheduled activity.
- The student has not evaluated different alternatives (-15)
- Student's part does not comply with proposal or with approved change requests (student must show evidences) (-30)
- Student's design does not follow proposed standards. (-20)
- Student's design does not follow required standards. (-20)
- Student has not started assembling Hardware without reasonable justification. (-20)
- Student has not started coding Software without reasonable justification. (-20)
- Student has not started implementing the prototype without reasonable justification (-20)

Understanding (25)

- The student demonstrates accurate, correct, and adequate understanding of his/her design.
- The student does not demonstrate understanding of his/her design (-25)
- The student does not demonstrate understanding of how his/her design integrates with the whole system (-20)
- The student does not demonstrate understanding of the scope of the project (-15)
- The student cannot answer questions demonstrating proficiency in his/her part (-15)
- The student does not show knowledge required for his/her part of the design (-15)
- The student does not describe the problems associated with the design and how he/she solved them (-10)
- The student does not know the power consumption (-10)

Proactivity (15)

- The student has thoroughly followed the Gantt chart schedule and has proactively begun ordering the necessary parts to begin their work.
- The student does not know the price or suppliers of his/her part (-15)
- The students has not ordered the parts (if justified, ok) (-10)
- The student has not completed their tasks according to the Gantt chart and there is no valid justification (-10)
- If project manager, he/she has not followed the status of or maintained communication with the group or updated Gantt chart (-10)

Comments

Contribution (Factor_____)

- □ Enough contribution (Multiply the total number of points by 1)
- □ Some contribution (Multiply the total number of points by 0.7 to 0.9)
- □ Not enough contribution (Multiply the total number of points by 0.5 to 0.6)
- □ Not contribution (Multiply the total number of points by 0.1 to 0.4)
- □ Not contribution (Multiply the total number of points by 0.0)

Complexity compared to Capstone standard (Factor _____)

- □ Enough complexity (Multiply the total number of points by 1.
- □ Below standard complexity (Multiply the total number of points by 0.7 to 0.9)
- □ Complexity is low (Multiply the total number of points by 0.4 to 0.6)
- □ Complexity is very low (Multiply the total number of points by 0.0 to 0.4)