

Lab 4 Rubric

Activity: Lab 4) Prototype Model Phase 2

Course: ECE 298 - Spring 2021

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Schematic	Yes 3 points	Mostly 2 points	Marginally 1 point	No 0 points	Criterion Score
1) All generic components replaced with real components that have part numbers and footprints					3 / 3
2) All IC power pins have been set to correct rails (i.e., VCC/VDD replaced with {+12.0V, +5.0V, +3.3V}, VEE/VSS connections replaced with GND)					3 / 3
3) Off-board components have been replaced with appropriate connectors					3 / 3
4) All Schematic power-entry pins have bulk capacitors, and all IC power pins also have decoupling capacitors					3 / 3
5) Every net is named and belongs to the correct net class (No DEFAULT net class)					3 / 3
6) All power rails and important signals have test points					3 / 3
7) Single-pin nets have been eliminated using No Connect terminations (NRST pin exempt)					3 / 3
Circuits are electrically correct					3 / 3
Reference Designators follow correct conventions, with descriptions as separate schematic or silkscreen elements (e.g., "U2" and not "ADC")					3 / 3

PCB	Yes 3 points	Mostly 2 points	Marginally 1 point	No 0 points	Criterion Score
All components are properly placed (bulk and decoupling caps close to IC power pins, connectors in accessible locations, etc.)					3 / 3
All nets are completely and neatly routed					3 / 3
Test points are appropriately located and have descriptive silkscreen for important signals ("GND", "SCLK", etc.)					2 / 3

PCB	Yes 3 points	Mostly 2 points	Marginally 1 point	No 0 points	Criterion Score
Criterion Feedback					
TP on the bottom can't be accessed					2 / 3
Silkscreen text is present, of adequate size, and not on pads, vias, holes, or too close to the board edge					
Criterion Feedback					
overlapping vias and pads					
Additional Criteria	Yes 2 points	No 0 points			Criterion Score
Netlist Report present					2 / 2
The PCB form factor and Morpho connectors (CN7, CN10) have not been moved or altered					2 / 2
Pick and Place File is present					2 / 2
Bill of Materials (BOM) is present					2 / 2
3D Visualizer views for the top and bottom assemblies are present					2 / 2
Pre-Production Check export is present and passes with no errors, failures, or warnings					2 / 2
Gerber files and READ-ME are present and include Copper, Silk, Resist, and Paste for Top and Bottom layers, and Drill layer					2 / 2

Total	51 / 53
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Overall Score

Exceeds
48 points minimum

Meets
42 points minimum

Marginal
32 points minimum

Below
0 points minimum