

ESE112 Lab 2 Grading Rubric

Section	Points	Breakdown
Intro	10	Clear aim and goal of what the student is doing and why.
Procedure	10	Simple but thorough details that should not be copied from the lab manual but not overly extensive.
Results	20	Results of any experimental trials including numbers, charts, graphs, and any tests shown to the course staff.
Discussion Questions	50	See below.
Conclusion	10	Clear and concise summation of the experiment and results.

Question	Points	Breakdown
Tabulate the measured and calculated values, and comment on the similarities and differences of the values in part 2. Are the actual values within the tolerance specified by the resistor?	4	Calculated and properly commented on values. (2) Specification whether within tolerance. (2)
Give a description of how your circuit could be interface with a computer or robotic system.	4	
Explain the plot in part 5 and comment on the calculation results.	4	
Explain the choices you made in your design of the light sensor circuit and back it up with mathematical analysis	10	Explanation of the arrangement of the components and the resistor values. (6) Mathematic evidence to back up values(4)
Give an example of a threshold circuit similar to the light sensor but with a different sensor (not the CdS cell) and a different output (not the LED). Describe a real world application of your example.	4	Realistic example of similar circuit. (2) Real world application that would actually improve the functionality of the device it was used on. (2)
Diagram of the board including the traces, the components, and any additional wires you required	6	
“Bill of Material” for the PCB. Total cost of the raw materials for a single light sensor	6	Comprehensive list of all parts used in the PCB with manufacture and prices. (4) Accurate total for all materials required for single light sensor (2)
Describe carefully the step by step operation of the system created with the photocell circuit, the LabVIEW virtual instrument, and the LED.	8	Careful description of each component (2) Comprehensive explanation of what each component did (4) Description of changeable values in the VI (2)
Describe your experience with using circuit simulation software vs. building circuit using actual components on protoboard.	4	