Project Rubric Version 1.21 Dr. M

Student Name: Lillian Tucker Score: 36 /37 97.3% + 6% EC

Date: 11/24 **Project 2: 4 digital circuit designs** 103.3%

Formatting & Visuals: Does the formal report format follow the guidelines? Are the results presented using appropriately labeled and annotated figures and tables? Does the selection and use of graphics display results in a clear way that follows convention (when appropriate)? Does the conclusions section state what was learned by completing the project? Is there a title page?						
Writing, figures, and notes are difficult to read and do not follow requested format	0	1	2	3		Clear visuals that follow requested format
Comments: Clear formatting. follows guidelines						
Introduction Section: Does the intro section clearly explain the goals of the project? Is at least 1 reference cited? Does it cover the following topics: • Explain the differences and uses of D-type and JK-type flip-flops (ie- characteristic tables & symbols) • Explain shift registers and an application in which they are used. • Explain what a ripple counter is and an application in which they are used.						
Missing or Incorrect	0	1	2			Included & Correct
Comments: Sub sections in Intro section work well. → All topics addressed.						
Methods / Materials & Circuit Design: Are there schematics for all 4 circuit configurations with meaningful figure captions? Are there photos of the projects as wired? Do all diagrams include labels for components?						
Missing	0	2	4	6	8 9.5 10	Included & Correct
Comments: * included LED / current-limiting R design. Nice job. * Figure 10 is missing, but explain in text how to create alternating light. -0.5						

Overall, well organized methods. SUBTOTAL: 14.5 /15

Results & Discussion: If included, are videos referred to in the report? Are all findings presented using both visuals and words? Is text included to accompany figures? Is there proof each circuit works (5 points each)?

Missing or Incorrect	0	4	8	12	16	20 (19.5)	Included & Correct

Comments:

* glad that you made your own video + gave your explanation

* Referred to videos in report
* why does shift register shift in all High? -0.5

Conclusions: Did the student achieve the goal of the project / experiment and summarize what was learned? Unexpected results must be explained.

Missing or Incorrect	0	1	2	Included & Clear

Comments:

good.

Extra Credit (10%): Wire up a 555 timer to behave like a clock. Incorporate it in at least 1 circuit. Appropriate schematic and design for clock frequency must be included for full credit.

Work was difficult to follow / unclear.	0%	2%	4%	6%	8%	10%	Key steps and values are described with both text and figures (and/or tables).

Comments:

Calculations + formulas unclear. Schematic included. What is the frequency of this clock?

SUBTOTAL: 21.5 /22