

# EE457: Digital IC Design

## Project #2 FALL SEMESTER 2023

### Report Cover Sheet\*

**Due 10/28/2023 by 8PM (-2 pts per hour up to 5 points/day)**

**PROJECT TITLE: CMOS 8-to-1 MUX**

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<b><u>Topics (Do not change orders of section)</u></b>	<b>GRADES</b>
Section1: Executive Summary (1/2 page)	Required
Section 2: Introduction and Background	/5
Section 3: Electric Circuit Schematics (TG and Conventional CMOS designs)	/10
Section 4: LTSPICE Simulation for Schematic (TG and Conventional CMOS designs)	/10
Section 5: IRSIM for Schematic (TG and Conventional CMOS designs)	/10
Section 6: Electric Layouts (landscape mode and must legible to see gates) (TG and Conventional CMOS designs)	/25
Section 7: LTSPICE Simulation for Layouts (TG and Conventional CMOS designs)	/10
Section 8: IRSIM for Layout (TG and Conventional CMOS designs)	/10
Section 9: Compare LTSPICE Measurements for Schematic and Layout ( <u>must provide comparisons between the two in table format</u> <u>Provide delays, rise and fall times.</u> )	/10
Section 10: Measurements of <u>chip area</u> , number of transistors for the layout (provide a table to compare) and write summary for TG and CMOS designs.	/10
Section 11: Conclusions and References	Required
Late Penalty	
<b>TOTAL</b>	<b>/100</b>

\*Penalty rules: A) -5pts per day for late submission. After five days, a score of zero will be given, but you are still required to complete the report. B) -2pts for any violations and delays submitted after 8PM.