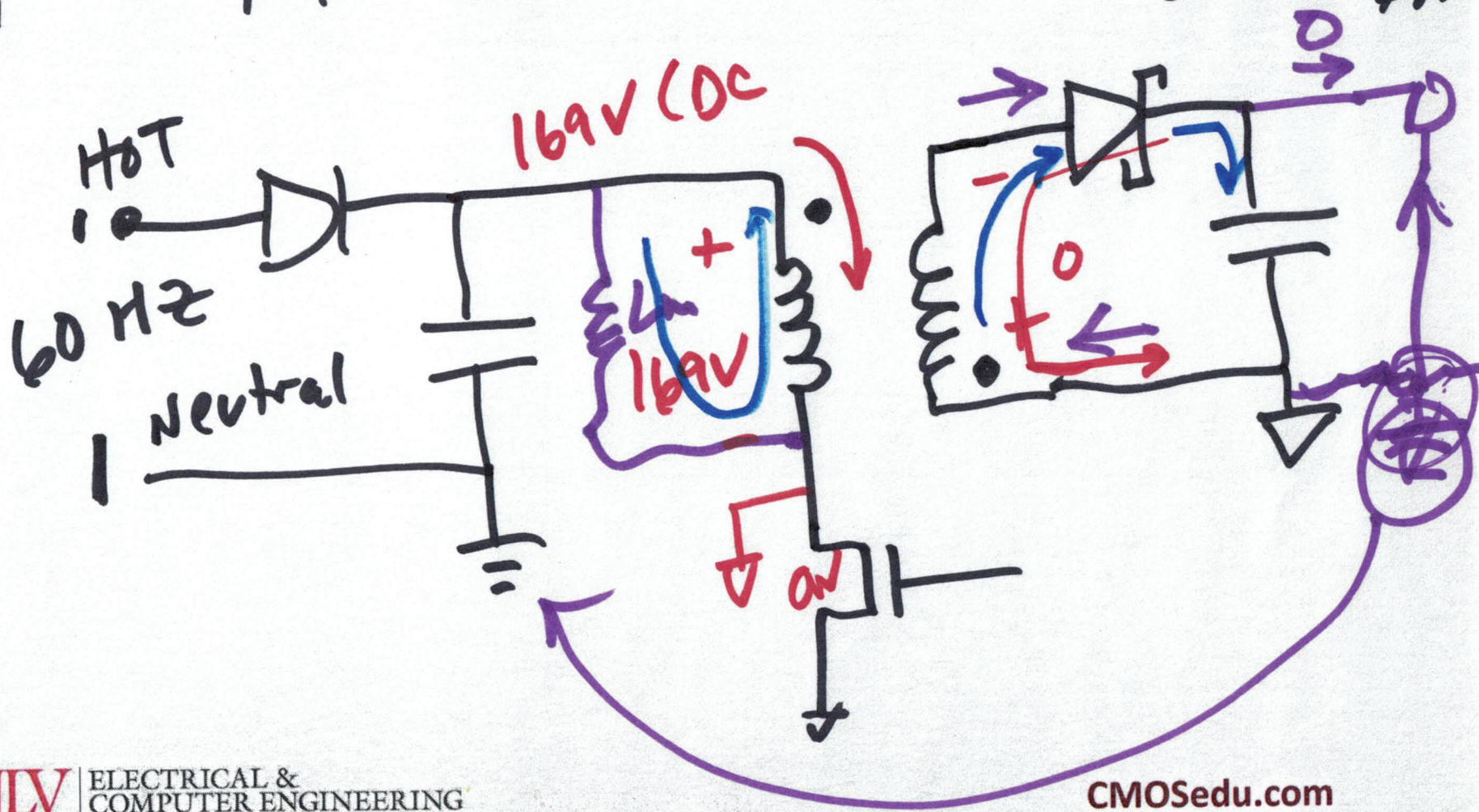


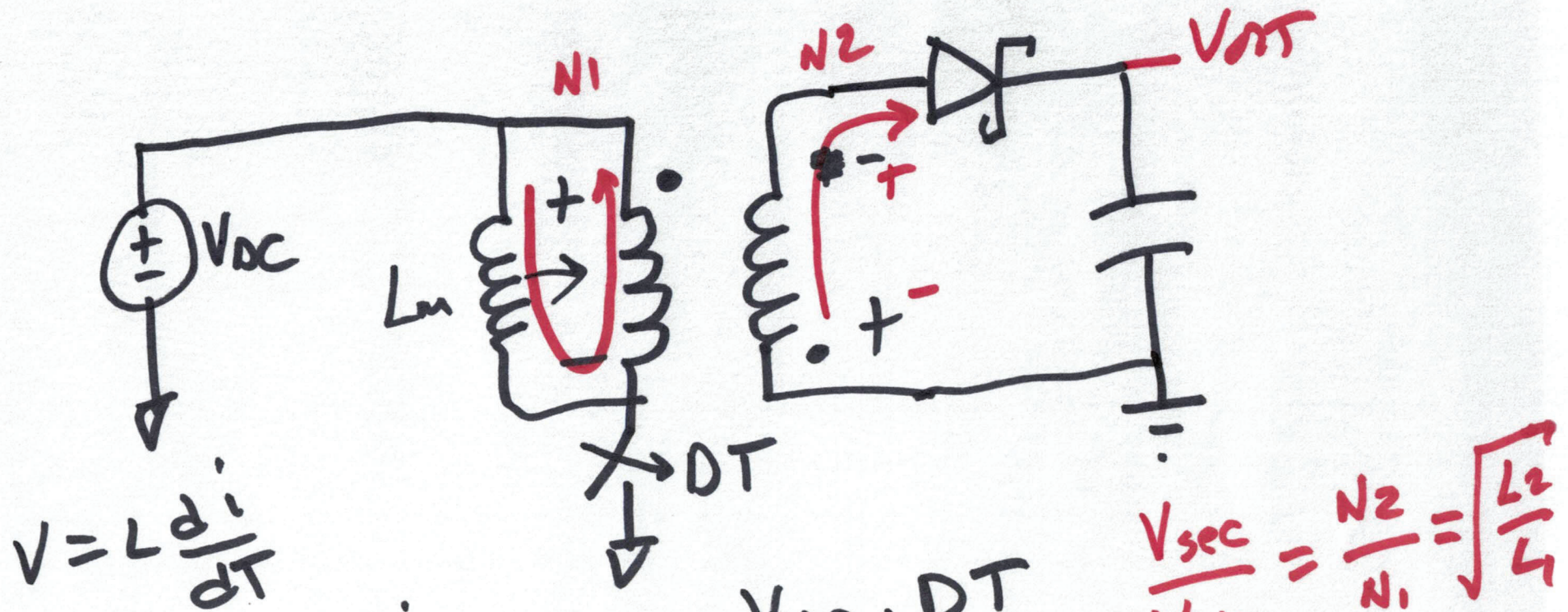
EE 442 / EEL 642

Power Electronics

10/5/2022 Lecture 11

Ground at 0V
+5V





$$\Delta i_{Lm,up} = \frac{V_{DC} \cdot DT}{L_m}$$

$$\frac{V_{sec}}{V_{prim}} = \frac{N_2}{N_1} = \sqrt{\frac{L_2}{L_1}}$$

$$\Delta i_{Lm,DN} = \frac{-V_{OUT} \cdot (1-D)T}{L_m} \left(\frac{N_1}{N_2} \right)$$

$$V_{OUT} = V_S \cdot \frac{D}{1-D} \cdot \left(\frac{N_2}{N_1} \right)$$

$$16.9 \approx \frac{169}{10} \approx 16.9$$

2)