ECE 8830: Advanced Electric Drives

Focus on the design and computer simulation of electric motors and variable speed drives. Topics to be covered include the design of synchronous, induction and permanent magnet motors; Park's transformation and D-Q modeling; CSI, VSI, 6-step, and PWM drive topologies. Modeling of various control strategies (including vector control) and stability of control loops will be covered. Design examples for high power (>1MW) applications will be provided.
Credits: 3.0
Prerequisites:
ECE 8580 :C and ECE 8800 :C