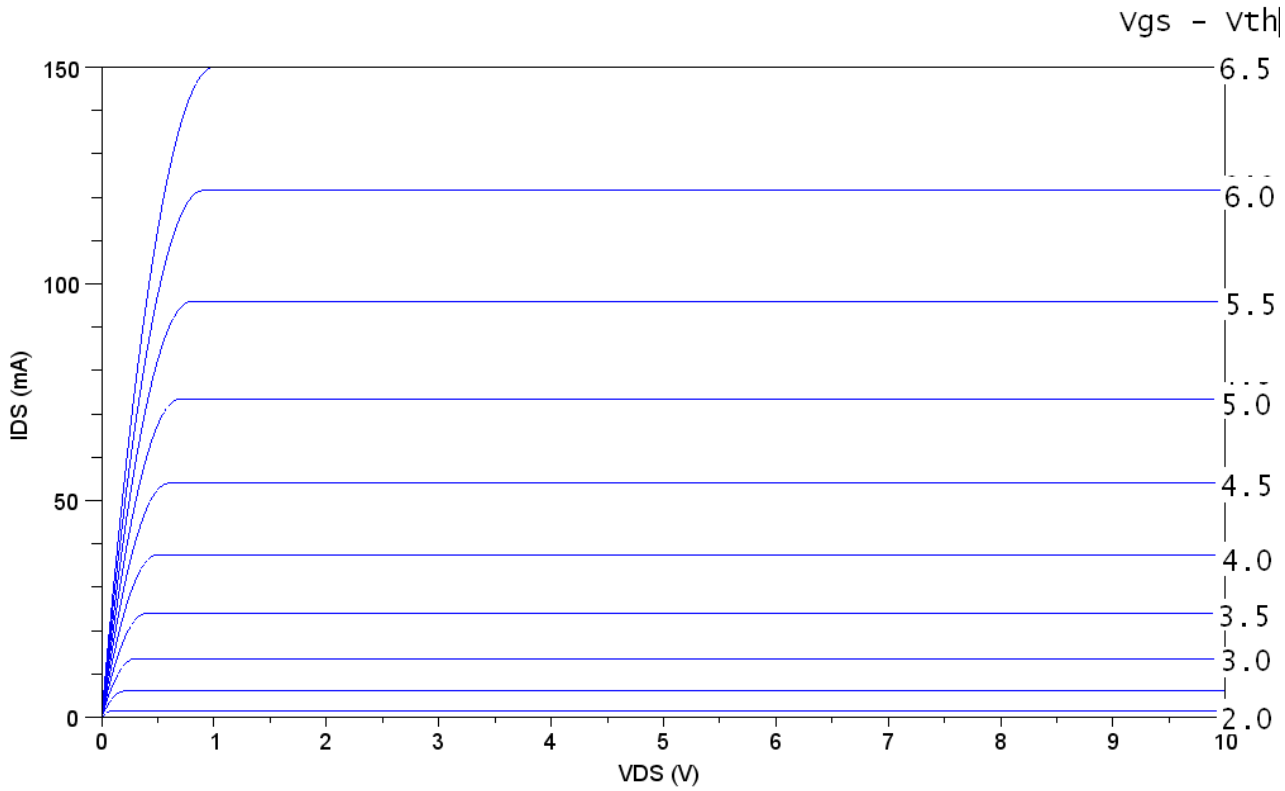
ECE 320 - Homework #9

MOSFETs, Term Project Part 2: Due Monday, March 21st

Assume a MOSFET has the following characteristics:



1) Label on this graph the off / ohmic / and saturated regions.
2) Determine the parameter, kn, and Vth for this MOSFET
3) Design a circuit which uses this MOSFET to turn on and off a 1W LED
   - Vf = 3.1V @ 300mA
   - 80 Lumens @ 300mA

Term Project (part 2)

Your term project must have two sections which include (total for the whole project) at least one diode, one transistor, and one op-amp.

4) Requirements: Specify the requirements for the first part of your term project
   - Inputs
   - Outputs
   - How they relate
5) Analysis: Show your calculations for your circuit design relating to meeting the requirements
6) Test: Check your analysis with a PartSim (or similar simulation)
7) Validation: Build your circuit in lab and collect data to verify you meet your requirements.