**311 Final Exam Review Topics**

**BJT DC Circuits**

* Base Bias
* Voltage Divider Bias - Approximation Technique/Solution
* Operating Point and Load Line Analysis

**BJT Common Emitter Amplifier DC and AC Analysis**

* CE Amplifier Full DC & AC Analysis
* T-Equivalent Model
* Amplifier Parameters: Zin, Zout, Av
* Generic Amplifier Model
* Review Common Emitter Amplifier Lab and Class Notes

**Multiple State Amplifiers**

**Opamp Circuits**

* Comparator
* Voltage Follower
* Inverting Amplifier
* Non-Inverting Amplifier
* Summer
* Differential Amplifier with emphasis on Signal Conditioning of Voltage Levels
  + I.E. Given a voltage range and input, can you scale and offset the voltage output of a device to match the given input.

**Mosfets**

* Switching Applications
* Vgs, Vgs(th), Rds(on)
* Power Dissipated
* H-Bridges
* Low-Side vs High-Side Switching

**DAC – Digital Analog Converters**

* Binary Weighted Resistor
* R2R Ladder
* Vref, Stepsize
* Full-Scale Voltage
* Output Impedance

**ADC – Analog Digital Converters**

* SAR – Successive Approximation

**1st Midterm Topics to Review:** Diodes, Zener Diodes, Power Supply