**Course Notes:** (BJTs pages 1, 2, 3, 4) *Note Correction on Page 1. $\beta = \alpha / (1 - \alpha)$ and $\alpha = \beta / (1 + \beta)$*
Characteristics Curves
Biasing Circuits and Quiescent Operating Points
Amplifier Configurations
Electronic Switches

**In-Class Exercise Problems:**
BJT Biasing Problems
Quiescent Operating Point
DC Load Line, AC without Load, and AC with Load Analysis

**Additional Homework Problems:**
BJT Biasing Problems
Emitter Biased, Common Emitter
Emitter Biased, Common Emitter with Emitter Resistor
Voltage-Divider Biased, Common Emitter
Voltage-Divider Biased, Cascaded Amplifier
Use the BJT Collector Characteristic Curves ($I_B$ , $I_C$ , & $V_{CE}$) to determine circuit values for $R_B$ and $R_C$

**Ideas To Be Cognizant Of:**

Synonymous Terms:
Quiescent Point (Operating Point) = ($I_{CQ}$ and $V_{CEQ}$) = Intersection of Load Line with Operating $I_B$

Definitions:
$V_{CE\ cut\text{-}off}$ = Value of $V_{CE}$ when $I_C = 0$
Generally, in all of the circuits we have analyzed in class, $V_{CE} = V_{CC}$
$I_{C\ Saturation}$ or $I_{C\ Sat}$ = Maximum Value of $I_C$ (occurs when $V_{CE} = 0$)
DC Load line: In general, slope of DC load line is set by the biasing resistors $R_C$ and $R_E$
Slope = $- 1/ (R_E + R_C)$