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 = $- 1/ (R_E + R_C)$