Please refer to the Course Notes for the topics listed below:
- Bipolar Junction Transistors (BJT)
  - BJT Amplifiers
  - BJT Amplifier Configurations
  - BJT Transistor Switch
- Junction Field Effect Transistors (JFET)

Be familiar with PN Junction characteristics.

Be familiar with diode characteristics.

Be familiar with
- bipolar junction transistor (BJT) characteristics and
- field effect transistor (FET) characteristics.

Be familiar with and be able to describe the operation of a BJT transistor switch, including sketching the schematic diagram, input and output signals, and the on-off mechanical switch analogies for a BJT transistor electronic switch.

The in-class exercise and homework problems related to BJT and JFET biasing should be particularly useful.

**BJT**

Given values for $\beta$, $V_{CC}$, $R_B$, $R_C$, $R_E$;
Determine the operating voltage and current (quiescent point) $V_{CEQ}$ and $I_{CQ}$,
- a. for an emitter-biased BJT common emitter amplifier,
- b. for a voltage-divider biased BJT common emitter amplifier,

**FET**

Given values for $V_{DD}$, $R_G$, $R_S$, $R_D$, $V_{GS}$, $V_{GS}(0)$, $I_{DSS}$;
Determine the operating voltage and current (quiescent point) $V_{DSQ}$ and $I_{DQ}$,
- a. for a self-biased JFET amplifier.