

## E151 Lecture 3 Handout

How is a diode constructed in a semiconductor? Consider a cartoon.

What is the depletion region? How is it formed? Why is it important?

What are the two current mechanisms in a PN junction? How do they vary with applied voltage?

What is the formula for a diode's i-v relation?

What is the thermal voltage? What is its value at room temperature?

What is avalanche breakdown and how is it used in circuits?