BE 1200: Design in Engineering

**Background**

* BIG SIX CONCEPTS *

- Arduino is an open source electronics prototyping platform based on flexible, easy to use hardware and software
- Can be used to develop interactive objects, taking inputs from a variety of switches or sensors, and controlling a variety of lights, motors, and other physical outputs
- Arduino projects can be stand-alone, or they can communicate with software running on computer

**What is Arduino?**

- Arduino board
- Motor shield
- Distance sensor
- USB cable
- Bluetooth module
- Vehicle body
- Breadboard
- Wires and cables

**Big Six Concepts**

- digitalWrite()
- analogWrite()
- digitalWrite()
- if() statements / Boolean
- analogRead()
- Serial communication

**Seven Layers Pyramid**

**Smartphone Arduino Robot**

**LED Cube**

**Cube Schematic Diagram**

**More Arduino Microcontroller Projects**