**Assignment**

Part One (2 weeks):

Make a robot that can follow a set route

 • The route will not change, nor will its location in the room

 • The route will be marked with black tape

Note: this can be accomplished with only the pieces provided, but you are allowed to add additional pieces or components if you choose.

Part Two (2 weeks):

Create an Android app that acts as a remote controller for the robot.

You may use any IDE that you choose (ex. Android Studio)

The app must connect to the robot through a bluetooth connection

The app must include:

 • Directional control (forward, backward, right, left).

 • Speed control

Tournament Rules:

 • Electronics and wires must be covered in some way (etc. construction paper)

 • No intentional damage to other robots

 • Balloons must be popped using the pins provided.

 • No launching devices.

 • The balloon will be taped to the back of your robot.

 • No covering or shielding the balloon.

 • Note: Extra components are allowed and encouraged.

**Components and Useful Websites**

Actobotics Sprout Runt Rover

https://www.servocity.com/sprout

Arduino Uno

https://www.arduino.cc/en/Main/Software

Motor and Servo Shield

https://learn.adafruit.com/adafruit-motor-shield-v2-for-arduino

Bluetooth Module

https://www.adafruit.com/product/1697