

# Collision Detection Specification, EE-31

David Janowsky && Kevin Destin

## Tasks

We would like you to create twelve bumpers for us. Each bumper consists of a 1.5x1.5in square of foam board attached to a switch.

## Milestones / Deadlines

One bumper should be prototyped by 2/22/2019.

All remaining bumpers must be delivered on day prototype meets the specification. This must be on or before 2/26/2019.

## Acceptance test criteria

### (1) Fragility Test

Structural integrity is of paramount importance to us. Therefore we expect the product to be well constructed. We will perform a test to verify the sturdiness of the product. We will drop the product off of a 225 lab bench, and verify that it does not break, and that it still functions correctly in a simple circuit (test 2).

### (2) Functionality Test

We need the product to work. We will integrate it into a simple led circuit to verify that the product allows us to detect when the switch is actuated.

## Monitoring and Escalation

As aforementioned we will visit you along the design process to verify that your prototypes meet our specifications.

If you repeatedly fail to meet the specifications we will have no choice but to take you to the **Court of Ron**.

## Penalties

If the final product still fails to meet the specifications you will give you a bad rating on the evaluation and we'll litigate.

## Price

- The switches cost \$2.16.
- The foam board and glue should cost  $\approx$  \$1.00.

So we expect parts to cost  $\$2.16 * 12 + \$1.00 = \$26.92$ .

- The assembly rate is \$30.00.

We expect you to work for 1 hour.

So the final cost should be  $2 * \$30.00 + \$26.92 = \$86.92$