The edema monitoring project incorporated both biomedical and electrical engineering to create a solution that effectively monitors edema.

### Introduction

The device will be powered by a 3V coin cell battery. This includes the Wheatstone bridge circuit, PIC-18 microprocessor, and micro SD card. The resistances that will regulate the Wheatstone bridge are valued at 481 ohms.

### Methods and Materials

The Wheatstone bridge was tested successfully to ensure the overall sensor would allow the voltage to show the change in pressure.

### Results

The edema monitor takes the input from the strain and successfully outputs to the LED's to alert the user. The SD card was not implemented due to missing header files.

### Conclusions

While the strain gauge provides information to display warning lights, the use of a pressure sensor would have been the more ideal method. The edema monitor performs its operations with a high level of sensitivity. Further technical developments could utilize resistance or capacitance in the leg. Additionally, a heart rate monitor has potential for edema monitoring.

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### References

2. ATP. ATP Industrial Grade microSD/microSDHC. 14 Dec 2015.  