

## Bio Mechanical Power Supply

The purpose of this product is to mechanically harvest energy from the movement of an individual's limbs. By using the torque produced by the joints of someone's body, this produce will drive a generator that will in tern charge a 3.6 V battery. Using system engineering disciplines this product will integrate the power produced by the knee's and elbows to supply a body mounted charging station. This charging station can be used to power a variety of electronics' but for this capstone we will use it to charge a cell phone.

See drawing for further description:

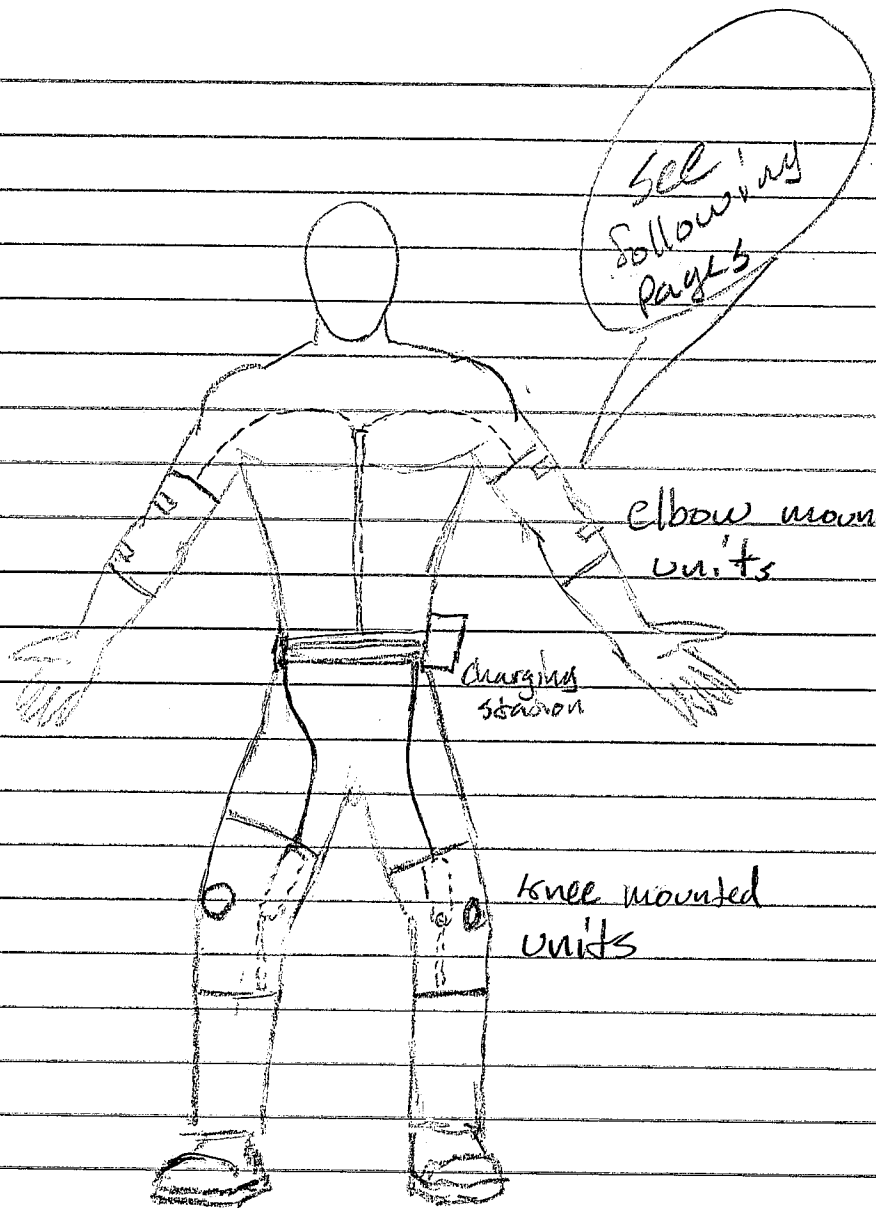
### Budget and where the money is coming from

I am asking that the department fund this capstone, the preliminary budget is as follows

Part	Number req	Cost
bridge rectifier	4	\$12
caps, res, ext	undetermined	\$50
Generators	4	\$50
Elbow braces	2	\$40
Khee braces	2	\$60
wire	undetermined	\$10
enclosure	1	\$10
miscellaneous	undetermined	\$40
<b>Total</b>		<b>\$272</b>

## Time Line

- Aug: Assemble the team
- Sept: Apply preliminary system engineering concepts
- Oct: Develop drawing, plans and schematics
- Nov: Develop and order parts
- Dec: Give building assignments to students to start building
- Jan: Continue to build
- Feb: Finish building and develop a testing plan
- March: Test
- April: Test and assign individuals to portions of the presentation
- May: Finish presentation and deliver product



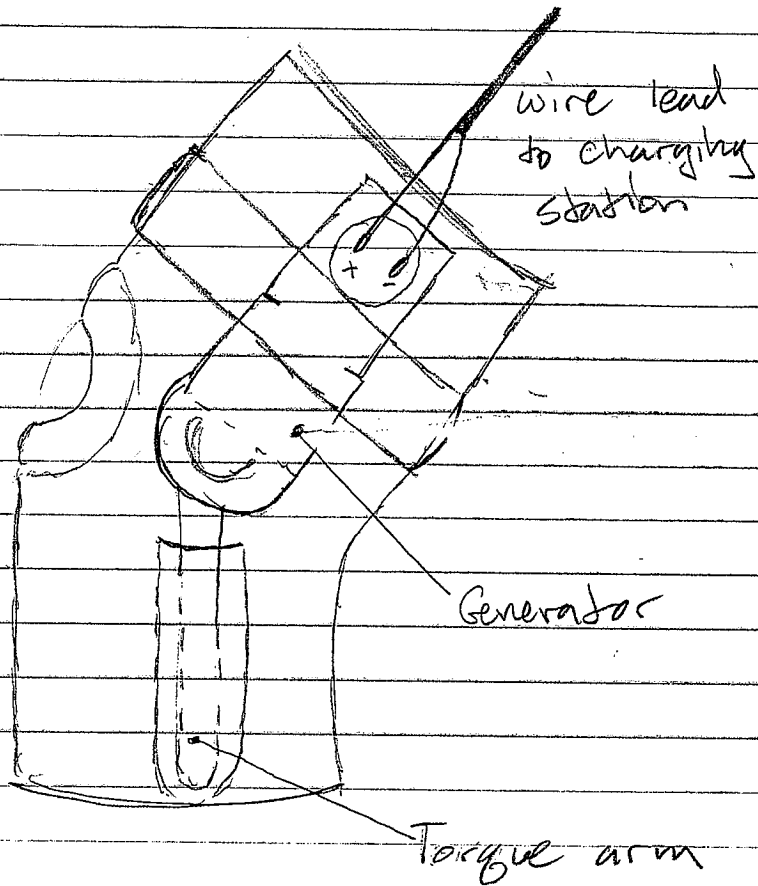
See following pages

Elbow mounted units

charging station

knee mounted units

# Knee mounted units



Elbow mounted unit

