



## **Team 4: Electric Juice**

Requirement Specification

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### Team Members:

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1. Size of implanted device
  - 1.1. Size under 8cm x 8cm x 1.5cm
    - 1.1.1. Preferred under 6cm x 4.5cm x 1cm
2. Charge Requirements
  - 2.1. Cannot use inductive charging (no electromagnetic or coupling)
  - 2.2. Does not damage battery by overcharging
  - 2.3. The implant operates at a temperature below 95°F
    - 2.3.1. Stretch: below 80°F
3. Materials
  - 3.1. Biocompatibility
    - 3.1.1. Implanted material for shell do not produce an immune response over long periods of time (>10 years)
    - 3.1.2. Materials inside shell do not severely deteriorate over long periods of time (>10 years)
  - 3.2. All electrical components are completely contained within a biocompatible shell
  - 3.3. The shell of the implant does not interfere with charging method
4. Power output
  - 4.1. Provide enough power to supplement heavy strain
    - 4.1.1. Between 5-19mA
    - 4.1.2. Between 1-10V
5. Wireless Communication (Stretch)
  - 5.1. Display current battery status. This includes:
    - 5.1.1. Charge level
    - 5.1.2. Charge Rate