**Project proposal**: 7th September

**Basic requirements:**

1. CPU

2. Radio

3. Charging circuit

4. Must be bare metal coding

**Expected Outcomes:**

1. Decide trade-off’s
2. Powering a battery
3. Design charging circuit
4. Maximize output energy using capacitors
5. Select radio protocol
6. Inverted F2.4GHz PCB trace antenna
7. Minimize EMI noise
8. Meet reliability goals using good components
9. Develop test plans
10. App to communicate with device
11. “*Unwritten Laws of Engineering*” – Book

**Class Structure:**

1. Energy harvest/USB charging port
2. Quizzes Posted: Monday – Due: Sunday
3. In class quizzes
4. Homework will be skill based, Altium, Super-capacitors etc.
5. 2nd week onwards weekly updates
6. Must work **EVERY WEEK** **!**
7. Decide how to split work on your own
8. Place note for PCB design instructions on official sites

**08/28/2019**

1. Design PCB Antenna
2. The proposal should outline; 1. How it is useful ? Which board ? etc
3. TI RF Designers guide read.
4. Maximum 5 pieces of Silicon ? [CPU, Charger, Amp if needed etc]
5. Confirm all the firmware before fabrication.

**Project Ideas**

1. Infrared camera
2. Dev kits will be provided.

**Projects Specifications**

1. Battery life
2. Product dimensions
3. Expected dimensions of final product
4. Other requirements
5. Turn off components when not in use

**Report Requirements**

1. Power planning
2. Application
3. Why?

**Report Contents**

1. Name
2. All team members
3. What is the project?
4. What problem solved? what value does it provide?
5. Features (Various elements of the project) and specs (Dimensions, battery, wireless range, temperature range, accuracy, humidity range, accuracy, warranty)
6. Package includes?