

# **Requirements of all Majors**

## **Task 3**

## **Week 3**

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## **Mechanics Requirements**

### **Functional:**

- Balance
- Design of foot joints
- Implementation of the walking movement
- Calculation of maximum angle of foot movement
- End Effector
- Foot motor type
- Design of Robot suspension system
- Knee joint design

### **Non-Functional:**

- Arm cover design
- The shape of the wheels in the foot
- Robot Shape

## **Electronics & Power Engineering**

### **Functional:**

- Motor type
- Control system Brushless Motor
- Electronic circuit design
- Motor moving algorithms
- Push button
- Automatically turn on and off the robot
- Automatic Stop Fever for Electronic Parts
- Sensor Types
- Temperature sensor

### **Non-Functional:**

- A sensor that measures the temperature of the air
- Coffee Quantity Surveillance Camera
- Coffee Heat Sensor

## **Artificial Intelligence and Robot**

### **Functional:**

- conversion Hardware to coding
- Robot movement on site
- Controlling the motors
- storage of information

### **Non-Functional:**

- Facial features

## **Internet of Things**

### **Functional:**

- stop button
- Convert audio to text
- Web Page Programming for Arm Control
- Text interaction with hardware
- Running Hardware connected with web
- database

### **Non-Functional:**

- Storage quantity of coffee consumed

