## Team Charter

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# CONTACT INFORMATION

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# OVERVIEW

## **MISSION STATEMENT**

**The goal of this project is to design an automated hydroponics system that can be controlled and monitored using a web interface for at least two weeks without requiring personnel to be present at the location.**

## **PROJECT DESCRIPTION**

**We are building a prototype of the hydroponics that includes many sensors, including: laser, photo, water, pH, temperature, and humidity. The laser system is to give a scan of the plant to determine the height. We will relay information from all the sensors back to a microcontroller that will process the information and act accordingly. All of this information through an Ethernet cable so that the user may see the progress of their plants, levels of each sensor, and override anything that they see necessary.**

## **DIVISION OF LABOR**

**Justin Johnson**

Justin will be designing the physical structure that houses the project and creating the designing the mechanical aspects of the laser scanning system. As the project progresses, he will be designing the web interface and updating the Gantt chart. He will be our team lead.

**Stark Pister**

Stark will be in charge of the design for the nutrient delivery system and associated servos and sensors. Additionally, he will be integrating the water pump and filtration system with the microcontroller. He will be serving as our deputy team lead and financial officer.

**Wayland He**

Wayland will be integrating the microcontroller with a Linux-based Ethernet system. He will also be implementing the pH sensor and designing the method to extract data from the sensor to the microcontroller. He will be serving as the secretary for our meetings.

**Danny Gunny**

Danny will be managing the power supply, distribution, and regulation for the project. He will also be designing the sensors and controls for the temperature and humidity. Danny will serve as the mediator for our group and choosing which microcontroller we will be using.

# CODE OF CONDUCT

## **MEETINGS**

All team meetings are mandatory and will be held in E2-309, the lab space assigned to the Smart Home Energy Monitoring Project. Meetings will be held ever y week on Tuesday and Thursday nights. We will also hold an additional meeting on Sunday nights to prepare for our weekly update with professors.

## **TIME COMMITMENTS**

Each team member is required to work at least 30 hours per week on the project and complete their assigned tasks for the week relative to the Gantt chart. Additionally, members are required to be in lab 5 out of seven days per week. Each member must also try to get at least six hours of sleep per night to maintain productivity.

## **TEAM INTERACTION**

Team members are expected to maintain good relationships with each other, as well as with themselves. Distractions of other group members, including poor hygiene, unwanted third parties in the lab, and invasion of working space will be discussed as a group, with majority rule determining the remedial **action**. Any group member may request any other group member to wear headphones rather than use speakers.

If one or more team members feel distracted from another member(s), and the distraction is not project related, the distracted members may ask them to kindly leave or focus on project related tasks.

## **BUDGET CONTROL**

Bookkeeping of expenses will be conducted by the Financial Officer. All major purchases should be discussed with the team lead.

## **DOCUMENTATION**

Each member is responsible for keeping a concise engineering notebook detailing any thought process or work/progress made in the lab. All pages must contain the date the contents were recorded and a page number, which will be used to create an up-to-date table of contents.

Formal documentation will managed by the Documentation Officer. All documents, including project proposal, block diagram, etc. will be kept in a three-ring binder which is to remain in the lab at all times.

## **DECISIONS**

All decisions can only be made final if all members of the group are present. Should a member be missing, the decision will be delayed until all members are in attendance. A motion shall be declared “passed” if a 75% majority has been achieved. Members are not allowed to abstain from any voting situation.

## **CONFLICT RESOLUTION**

Any dispute/conflict affecting the entire group should be brought to attention during weekly meetings or when all members of the group are present. Conflict resolution will use the same guidelines detailed in the decisions section of the charter. If a dispute is purely between two individuals, the team lead will be in charge of mediating the situation. Should the dispute involve the team lead, the entire group will mediate the disagreement per the decision guidelines.

## **TERMINATION POLICY**

Termination from the group is ultimately at the discretion of the instructors. However, should any team member consistently cause delays, such as failure to meet deadlines or produce sub-par work, or violate terms agreed upon in this charter, the team member is subject to termination from the team. Prior to proposed termination, the team member in question must be approached by the team lead as well as one other member of the group to discuss the issues and proposed solutions. Should no improvement be made, a third party such as Pat Mantey or David Munday will be brought in to resolve the issues. If problems still persist, a unanimous vote from the remaining members of the group will request the termination of the disruptive member from the group.

## **ADDENDUMS AND CHANGES TO THE CHARTER**

Any addendum to the charter may be proposed at the weekly team meetings. A 75% majority vote must be achieved to make changes. Should any changes be made, the new charter must be printed and signed by all members.

# AGREEMENT

By providing your signature below, you are agreeing to abide by the rules set forth in this charter written for the Automated Care and Monitoring of Plants Project, Jack Baskin School of Engineering Senior Design class of Winter/Spring 2013.

Justin Johnson Date

Stark Pister Date

Danny Gunny Date

Wayland He Date