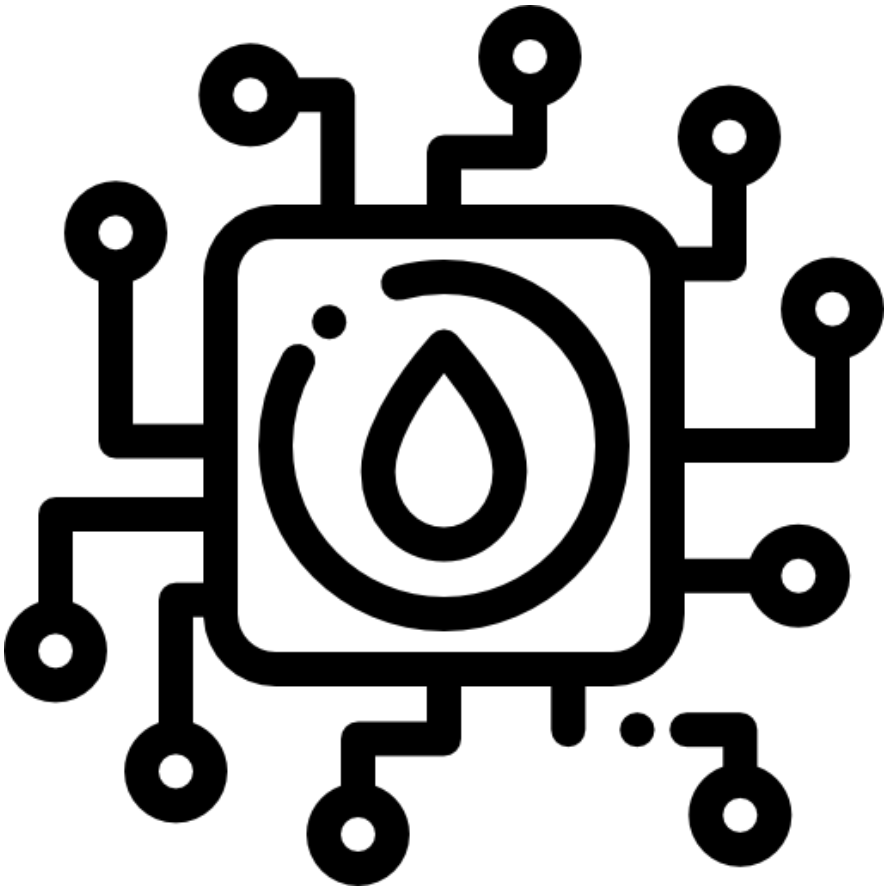
Oregon Institute of Technology
ESET Department

Design Project Control

Water Conservation Using Embedded Systems



Submitted by

Oregon Tech ESET Student:

Adin De'Rosier

Approved by

Senior Design Instructor:

Oregon Institute of Technology
ESET Department

Design Project Control

ESET Senior Design Project

Department of Embedded Systems Engineering Technology

Oregon Institute of Technology

MEMORANDUM

November 7th, 2022

TO: Phong Nguyen

PM ESET Instructor

FROM: Adin De'Rosier

SUBJECT: Design Project Proposal Submission

Enclosed is my senior design project control, Water Conservation Using Embedded Systems. This proposal is submitted for fulfillment of the Senior Design Control requirement outlining the control for the project and stipulations.

1. Project Dismissal

- If dismissal is proposed a meeting will be held with the project supervisor to discuss options and situation

2. Absence of Project Design Review

- Absence of Project Design Review is not admissible and will be counter towards a project dismissal consideration.

3. Missed Deadlines

3.1 Ordering and Receiving Parts

- Order details will be tracked in an excel document that will include:
  - Date Ordered
  - Cost
  - Supplier
  - Date of Arrival
- Document will be checked and updated in a timely manner
- If parts are not ordered on time decision will be made regarding acquiring a substitute part
- Parts are to be ordered early enough that a 3-day grace period will be observed for all parts
- If a part is not arriving within 3-day grace period inform the excel document with a note and begin planning for ordering from an alternate source
- If delay is unavoidable, adjusting the project schedule may be considered along with cause for delay clearly stated

3.2 Schematics

- Schematic design is to be completed per part within 1 week of receiving the part
- Schematics that require extra design time may be considered and an adjustment to the project schedule can be made with proper cause clearly stated

3.3 Hardware

- Hardware may be delayed by shipping logistics
- If damage is found on hardware and a replacement part is required, new parts will be ordered as soon as possible
- Hardware will be tested and examined to ensure that proper operating conditions are met and to find possible defects as soon as possible
- Hardware will be tested in a breadboard before being integrated into final design
- Once all hardware modules have been designed and tested parts will be integrated into final enclosure, which will then require additional testing
- Final design will include soldering and modifications to support all hardware modules in question as well as a basic level of water tightness

3.4 Software

- Software should be committed and uploaded any time that it is worked on to avoid losing progress
- Comments should be present in software to help with understanding and future features
- If code is delayed changed may be considered to project schedule and a proper cause will be noted therein
- Software should follow industry standards and be compliant with any specific language style guidelines

3.5 Integration

- Software integration will be handled using GitHub in the project owner's git repository
- Changes made to software are to be well documented and always in GitHub
- Hardware integration will be done using a breadboard before moving on to a more complex final design with demonstration functionality

- Changes made to hardware are to be well documented in schematics and video logs explaining changes made to the project

3.6 Changes to Schedule

- Schedule is presented through a Microsoft Project Document
- Schedule will be updated at the start of each term for their respective progress assuming no delays
- Copies of base schedule and any alterations made will be kept for record of past changes
- Active changes or delays will be marked and represented in the schedule document with cause and justification for delay
- Meetings weekly with Project Supervisor to discuss project schedule and timeline are required on Tuesday at 12:30pm

3.7 Project Supervisor Dismissal

- Project Supervisor will only be contacted to give updates and ask pertinent questions regarding the project
    - Contact methods include email, phone calls, and text messages
- The Supervisor will have 48 to give a reply
- If no reply is received after 48 hours an additional attempt will be made, in which case 24 hours will be given for acknowledgment
- If contact is made in the additional 24 hours justification will be given by Project Supervisor
- If no contact is received after 72 hours or a lack of justification is given after 48 hours, then a meeting will be arranged with supervisor to discuss
    - Notice of meeting will be sent to supervisor via email and will be held on Microsoft Teams
- Supervisor will have 1 week to give timely and detailed feedback for any project submission
- Supervisor will make time to go over feedback with Project Owner