

PSU ECE Capstone Team 3 Contract

Contact Information

Team Members

| Team Member Name | Phone | Email |
|------------------|----------------|------------------|
| Felix Moss* | (702) 277-8090 | fmoss@pdx.edu |
| Eisa Alsharifi | (951) 425-6900 | eya@pdx.edu |
| Annika Boyd | (910) 524-9059 | amb27@pdx.edu |
| Nathan Truong | (971) 712-0612 | nathantr@pdx.edu |

Industry sponsor

| Organization and Name | Phone | Email |
|-----------------------|----------------|-----------------------|
| Josh Mendez | (503) 725-3008 | joshua.mendez@pdx.edu |

Faculty Advisor

| Name | Phone | Email |
|-------------|----------------|-----------------------|
| Josh Mendez | (503) 725-3008 | joshua.mendez@pdx.edu |

Project Objective

Our objective is to design and develop a functional prototype of an electrostatic dust analyzer (EDA) that can detect and characterize charged particles in atmospheric environments to help identify hazardous particles.

As a team, we also would like to:

- Relearn our electrical engineering fundamentals
- Gain more hands-on experience in analog electronics, machining, and PCB layout
- Build practical skills in prototyping, mixed-signal electronics, and data analysis
- Deliver a project that meets the sponsor's expectations while keeping our grade high

Member Skills, Strengths, and Areas of Practice

| Teammate Name | Key areas of strength to leverage in the project | Key areas of practice and development in the project |
|----------------|---|--|
| Felix Moss | Schematic, PCB design, group documentation/management, and soldering | 3D printing, machining, analog-to-digital circuitry, op-amps |
| Eisa Alsharifi | Schematic, PCB layouts, C, and soldering! | 3D design, op-amps, and ADC |
| Annika Boyd | Schematic, PCB design, Soldering, and Hardware debugging | 3D Design/Machining, Analog Design |
| Nathan Truong | Circuit designing, Circuit prototyping, Hardware debugging and data analyzing | Analog design, op-amps, 3D design |

Meetings

Team Meetings

Frequency: Twice a week

- Sunday at 2 PM (via Discord)
- Wednesday at 3 PM (In-person)

Expectations:

- All team members must attend and actively participate.
- Provide updates on individual project progress.

Agenda:

- Coordinate project work and responsibilities with team members.
- Discuss and address any challenges or blocks encountered.
- Complete the weekly progress report.

Preparation:

- Review the week's assignment.
- Review all individual work completed.
- Read any materials provided by the sponsor or advisor.

Note-taking (minutes):

- Felix (20)

Other Expectations:

- Come prepared with any necessary materials and updates.

Team meeting with Industry Sponsor/Faculty Advisor

Frequency: Once a week

- Wednesday at 2 pm

Platform:

- In-person meetings

Expectations:

- Read any materials assigned by Josh, be prepared to showcase progress, be prepared to take notes during meetings.

Communications

Preferred Method of Communication

Discord and **Email** are our team's preferred means of communication.

Information Architecture

We will share docs/files through **Google Docs**, **Google Drive**, and **GitHub**, as well as some reading links and articles by **Discord**.

Team Working Agreements and Expectations

Guiding principles of how we work together

We're committed as a team to maintain a healthy relationship between both ourselves and our faculty advisor. We hope to cultivate a working environment where communication and the delivery of great work is paramount. We value open and timely sharing of ideas and concerns to overcome challenges. Each member is accountable for completing their tasks on time and contributing to the overall success of the project. By focusing on quality and adhering to our sponsor's expectations, we ensure our work meets high expectations. Additionally, we use feedback and continuous learning to refine our skills and deliver the best results.

How we make decisions

We will plan ahead, communicate through Discord or during meetings, and a decision will be made when every team member and the faculty advisor/sponsor agree.

Approach to conflict

Bring up any conflicts or disagreements during team meetings, come up with an arrangement or solution within the team members. If this doesn't work, schedule a meeting with the faculty advisor or Andrew for a solution.

Project Standards

We aim for high standards and quality to all deliverables so that we produce the best possible outcomes, and to be as accurate as possible when testing in real world environments. We will regularly review our work and check with both the IS and FA along with a third check before fabricating and big steps.

How we will hold each other accountable

Everyone asks for the tasks that cover the areas they want to improve on for this project. Everyone makes sure that the work is divided evenly between team members. Speak up if you feel that the workload is not divided evenly. Ask team members frequently if they have any trouble or questions about their assigned tasks. A participation slide is required in the final presentation, so self-awareness is also important when it comes to team collaboration.

How we will give and receive feedback

Our team values continuous improvement through regular, constructive, and respectful feedback. Feedback will be shared openly during both team meetings and in sponsor meetings. This feedback will focus on specific behaviors and deliverables rather than personal traits, using clear examples to clarify points. It will highlight strengths, suggest improvements, and propose actionable solutions. Additionally, we will allocate time for both peer and advisor input on the proposed solutions. We will describe the impact of actions, test assumptions by inviting input, and ask how we can provide support. This in turn will help our team build trust and effective collaboration. Team members will actively listen, seek clarification as needed, and use feedback to enhance performance and align with project goals. When necessary, we can create action plans to ensure accountability and improve outcomes.

Team Contract Signatures

By typing in your name, you agree:

- a) I participated in formulating the standards, roles, and procedures as stated in this contract.*
- b) I understand that I am obligated to abide by these terms and conditions.*
- c) I understand that if I do not abide by these terms and conditions, I will suffer the consequences as stated in this contract.*

| Team Member Name |
|------------------|
| Nathan Truong |
| Felix Moss |
| Annika Boyd |
| Eisa Alsharifi |