

## Spring 2023 ECE 445 Team Contract

**Instructions:** The content of this document should be specific to your goals and needs. Ideas for the content of each section are provided as suggestions.

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<b>Project No. and Name</b>	
Member Name, netID	Cindy Su, cindysu2
Member Name, netID	Subhi Sharma, subhis2
Member Name, netID	Subha Somaskandan, sbs8

ECE 445 is a project-based course. The course includes both team and individual grades. Project teammates generally all get the same grade for team assignments based on the expectation that all team members do their fair share of the work involved. The purpose of this contract is to lay out the tasks needed for the successful completion of the project and distribute them in a fair and efficient way to the team members. It will also discuss how the teammates will work together during the project and address any issues that come up. A contract that promotes good teamwork that leads to a successful project should:

- Acknowledge that each team member has commitments and responsibilities outside of ECE 445
- Encourage open communication about challenges that team members are facing, both in and out of ECE 445
- Give team members the benefit of the doubt and the opportunity to explain themselves when something goes wrong and resist jumping to judgment

### Project Description:

Our project tackles the challenge of maintaining adequate daily water intake through a portable device that attaches to your existing water bottle. By monitoring the frequency and volume of your water consumption via weight changes, the device provides hydration insights directly to your smartphone. The device will be designed to fit various water bottle sizes with added GPS tracking for location-based reminders.

### Project Goals:

**Hardware:** The hardware of the device will have the ability to precisely measure the weight of the water bottle before and after consumption, allowing for accurate tracking of water intakes. It will also have a long battery life that supports extensive use, minimizing the need for frequent

recharging. In addition, the design of the hardware will be compact, lightweight, and easy to carry

Software: The software achievements includes a mobile app that uses input from the user (age, sex, activity level) to set personalized hydration goals. It will also be able to provide feedback on water intake and send timely reminders and encourage users to stay hydrated throughout the day. And lastly, it will use GPS to track the location of the water bottle and perform analysis on water intake data to offer insights and trends over time.

Expectations (ground rules) for each member:

1. Active participation in all team meetings.
2. Actively respond and communicate in the group chat.
3. Establish regular meetings to discuss progress.
4. Establish short term and long term goals during each meeting.
5. Responsible for assigned tasks and making sure they are completed on time.
6. Being flexible and open to considering different perspectives.

Roles:

Subha and Subhi(Electrical Engineers)

- Roles and task: Focus more on the development and testing of the hardware components, including design of the weight sensing mechanism and GPS tracking.

Cindy(Computer Engineer)

- Roles and task: Focus more on the development of the software application, including personalized hydration tracking algorithms, backend development, and integration with the hardware device.

Collaborated task:

- Design the devices to make it lightweight, portable, and ensure the device's adaptability to different water bottle sizes.

Project Meeting Time(s):

We are free typically in the early afternoon and evenings most days, and we have met up to research parts for our product. If we do work alone, we have a group chat where we ask any questions and update each other on our progress. An ideal time would probably be 1-3 pm or 5-9pm most weekdays.

Agenda:

We will rotate the role among team members on a weekly or bi-weekly basis to set the agenda. Beyond the formal weekly meetings with the TA, we will hold weekly meetings to discuss progress and assign tasks to keep the team on track during the semester. We also set up a group chat to keep everyone informed on any deadlines and updates. All the decisions will be agreed upon by all members of a group, and will rotate among team members on a weekly or bi-weekly basis to be appointed to keep records.

Process and penalties for dealing with team issues:

If someone is not pulling their weight, we have all agreed to have one person (whoever is more comfortable) to confront that person and ask them why that is. We are all flexible, so in case that person has too much on their plate, we can compromise and divide the work out differently. If poor work ethic is displayed 3 or more times, we will ask the TA or professor to intervene.

## End-of-term agreement on using final peer assessment for grade adjustment:

We believe that this contract will help hold ourselves accountable , and push each member to try their hardest in our designed areas. We agree that this contract should hold ourselves accountable, as we are all working as a team and each of us play a decent role in our finished product.

**Signatures:** Iterate on this document until everyone is comfortable with its contents and signs (it is okay to type your printed name as your digital signature).

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*I affirm that I participated in generating this team charter and that I will abide by its contents to the best of my ability. Furthermore, I understand that failure to meet the expectations expressed here can lead to the stated consequences.*

netID: cindysu2      (digital) Signature: Cindy Su      Date: 2/8/2024

netID: subhis2      (digital) Signature: Subhi Sharma      Date: 2/9/2024

netID: sbs8      (digital) Signature: Subha Somaskandan      Date: 2/9/20204