

## Spring 2025 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>	<b>Team 40 – Smart Medical Pill Dispenser</b>
Member Name, netID	Aryan Gosaliya, aryanag2
Member Name, netID	Aryan Moon, aryanm7
Member Name, netID	Adi Perswal, apersw2

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 judgement

**Project Description:** The Smart Medical Pill Dispenser is an automated system designed to accurately dispense medications at scheduled times, notify users about missed doses, and provide alerts for refills. The system integrates Bluetooth-enabled notifications and a power backup to ensure reliability and accessibility for elderly patients.

### Project Goals:

- A 98.4% accuracy rate in pill dispensing
- Timely user notifications within 5 seconds of scheduled times
- A functional mechanical sorting mechanism with stepper motors
- Seamless Bluetooth-enabled mobile/web app integration
- Reliable power backup for continuous operation during outages

**Expectations (ground rules) for each member:** *Try to list six or more minimum expectations. Consider aspects such as preparation, participation, feedback, responsiveness, etc. Try to explicitly list anything that could potentially turn into a problem. Find ways to encourage everyone to communicate (this may also fall under “tasks”).*

- Meeting 2 times per week (initially scheduled for Mondays and Tuesdays, but subject to change based on exams/ta meetings)
- Having clear communication verbally and over text
- Having honest communication even if it's a difficult conversation
- Providing feedback on every single assignment and work split apart
- Responding within 12 hours if over text or referencing call
- Submitting assignments based on personal set deadlines (usually 24 hours before real deadline)

**Roles:** *Do you see this team performing well because everyone works together and contributes equally? Are there certain aspects of the project that some teammates excel at? Can tasks be spread among individuals to optimize progress toward the final product?*

- KiCAD modeling will be worked on by all parties as it is the largest portion of the work
- 3D CAD modeling will be led by Aditya as he has experience in it
- Wiring and power system will be led by Aryan Moon
- MCU programming and connection will be led by Aryan Gosaliya
- We believe every subsystem could be split apart, however, we plan to work together on most subsystems so we each learn about specialties outside of our own

**Project Meeting Time(s):** *The team will meet at the scheduled team meeting with TA each week. Can you also preset an ideal time for team meetings in the lab (your team may need to sign up for lab bench access)? Is your team interested in meeting to work on other aspects of the course together such as project research?*

- The team will meet twice a week for 1-2 hours each time
- One meeting weekly will take place in the lab at minimum
- Second meeting weekly can be decided at the time of the meeting
- Meetings will occur in late afternoon or early evening
- TA Meetings times are yet to be decided but all 3 team members will attend these meetings exceptions being those that are allowed by the University

**Agenda:** *Who will set the agenda? Beyond the weekly meetings with the TA, what will the team do to ensure that it stays on track during the semester? When a decision needs to be made, will it be approved by consensus or majority vote? Will a team member be appointed to keep records?*

- Agendas will be set by the group as a whole
- Notes will be taken during each team meeting
- The lab notebook (GitHub) will be updated regularly
- Majority vote will determine where we head with the project
- Aditya Perswal will take notes
- Aryan Gosaliya will maintain notebook organization
- Aryan Moon will serve as time keeper to ensure we don't waste away meeting hours

**Process and penalties for dealing with team issues:** *What happens when ground rules are broken? Who intervenes? What happens if the situation escalates? Always remember not to jump to judgement. Give group members the benefit of the doubt and the opportunity to explain themselves when something first goes wrong. TAs and instructors are available to help resolve issues.*

- If someone breaks ground rules, it will be brought up right away
- It will first begin with teammates asking to not break the rule again
- It will escalate to a written reason for why the problem occurred being needed
- Eventually the problem would escalate to TA then Professor

**End-of-term agreement on using final peer assessment for grade adjustment:** *Do you believe that this contract should hold your team accountable to its contents or that it may hold little value? There will be two formal peer assessments this semester. The first is used only to provide honest, constructive feedback to each team member. The second peer assessment affects a teammate's grade. Without accountability, many promises go by the wayside.*

- This contract will hold great value for our team

**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: apersw2      (digital) Signature: Aditya Perswal      Date: 02/13/2025

netID: aryanm7      (digital) Signature: Aryan Moon      Date: 2/14/2025

netID: aryanag2\_      (digital) Signature: Aryan Gosaliya      Date: 2/14/2025