# **Spring 2024 ECE 445/ME 470 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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| **Project No. and Name** | Satellite Orbital Routes |
| Member Name, netID | Zhihua Gong, zhihuag2 |
| Member Name, netID | Wenhan Jiang, wenhanj3 |
| Member Name, netID | Lunan Ke, lunanke2 |
| Member Name, netID | Kuangji Chen, kuangji2 |

ECE 445/ME 470 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/ME 470
* Encourage open communication about challenges that team members are facing, both in and out of ECE 445/ME 470
* 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:

Show a 3D model of a single satellite footprint over the Earth. The idea is to make the satellite stationary or move it along a 1D axis to vary its altitude, whereas the 3D Earth placed in a stand with internal wheels can rotate in a pre-calculated way.

Project Goals:

A 3D hardware demonstrator showing how a satellite flies about the Earth. The satellite is stationary, Earth rotates.

The program calculating and storing the route of the satellite will be fixed into the circuit that controls the movement of the hardware.

Expectations (ground rules) for each member:

Preparation: Each group member should be well prepared before the lab each week.

Participation: Each group member must ensure that he take part in the weekly lab part and meeting part or provide proper excuses for absence.

Feedback: Each group member should provide feedback in time, which includes both his opinion about a certain part of the project and any problem he encounters in his part.

Responsibility : Each group member should shoulder the responsibility of this part and try his best not to ask other members for help( since others also have their own parts).

Communication: Each group member should ensure that he could be contacted easily at normal time and response actively to others’ questions. He should also communicate with the instructor frequently.

Academic Integrity: Each group member should ensure that he do obey the academic integrity rules and not copy from others without authorization or citation.

Roles:

We divide the roles in our group as follows:

1. Zhihua and Wenhan are responsible for the PCB and control part of the device
2. Kuanji learn the orbital route and find ways to apply the calculation to the device.
3. Lunan can design mechanical parts of the globe and earth to make sure that it can match with the circuit part. He also design the connection parts to the motor. Moreover, he will be in charge of assembling

Project Meeting Time(s):

The team will meet with Professor Pavel Loskot once a week at weekends. We initially plan that we have lab on Wednesday ( When we have least courses) and meet with our instructor on Sunday. And we may temporarily add meeting times for lab according to our specific agenda or schedule of that week. Our team is also interested in meeting to work on other aspects of the course together such as project research.

Agenda:

Zhihua Gong will set the agenda and select the time when everyone is available to be the lab time, we will set up a check list every week to ensure that every task this week goes on properly, and by the end of each week, we will also set up the goals and tasks for next week. If something unexpected happens, then we can also spend more times. In a conclusion, we make schedules to ensure everything goes on well. When a decision needs to be made, it will be approved by consensus so that everyone will agree on this plan. We take turns to keep records( thus 4 weeks a round) of the results and plans.

Process and penalties for dealing with team issues:

When ground rules are broken, for example when a team member cannot finish his task in time due to personal issues, we will first discuss if he can solve it individually in next week. If the mistake affects the whole process or cannot be addressed in short time ( one or two weeks), then the group in whole will change the pace and strategy of project and will discuss with our instructor to see what can be done. Since we finish the project as a team, we are sure that we do not have jumping judgements and work together to make things well.

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

Each member of our team agree to and believe that this contract will hold us accountable to our contents. We stated before that we will work together to face difficulties and find solutions, but we also evaluate each other’s performance objectively. We also believe that the peer assessment will help us ensure the good going of the project.

Signatures:

*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: zhihuag2 (digital) Signature: Zhihua Gong Date: 2024/1/23

netID: wenhanj3 (digital) Signature: Wenhan Jiang Date: 2024/1/23

netID: lunanke2 (digital) Signature: Lunan Ke Date: 2024/1/23

netID: kuangji2 (digital) Signature: Kuangji Chen Date: 2024/1/23