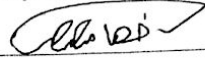# Project Team Charter
ME476C: Capstone I
Signature Cover Page

Each team member will copy the following statement in their own handwriting (LEGIBLY) in one of the designated areas below:

I agree to do an equal amount of work in the team. I understand that my grade will reflect my effort in the team.

Print Name: Jehad Alqubaisi   Signature: Jehad

> I agree to do an equal amount of work in the team. I understand that my grade will reflect my effort in the team.

Print Name: Sutton Alzahrani   Signature:

> I agree to do an equal amount of work in team I understand that my grade will reflect my effort in the team.

Print Name: Adi Alqurashi   Signature:

> I agree to do an equal amount of work in the team. I understand that my grade will reflect my effort in the team.

Print Name: Abdullah Alshammari   Signature:

> I agree to do an equal amount of work in the team. I understand that my grade will reflect my effort in the team.

Print Name: Abdullah Alotaibi   Signature:

> I agree to do an equal amount of work in the team. I understand that my grade will reflect my effort in the team.

Project Team Charter
Senior Capstone Design
Signed copy of charter is due by date posted on Bb Learn

To create a team charter for your capstone project, follow these steps:

1. Schedule an online meeting (Zoom, Microsoft Teams, etc.) that all group members will attend.

2. In advance of the meeting, all group members should:

a) Review the attached "Ground Rules for Difficult Group Discussions." These documents contain helpful information and useful parameters for team conversation and discussion.

b) Review the attached team charter form and prepare your input for the meeting. Every team member is expected to contribute to charter development.

3. During your meeting:

a) Designate one team-member as project manager. This person will be a single point of contact for the team.

b) To ensure that everyone's ideas will be heard and considered, establish a protocol for sharing team member input on charter contents. For example, will each team member present all prepared input up front, or will you share input and develop the contract section by section?

c) Using the protocol you've agreed on, conduct a group discussion that results in a team charter for your senior project.

- Take this discussion seriously and participate fully. The power and success of your team's charter comes from the conversation and agreements on which it is based.

- Moreover, the roles and responsibilities documented in your charter will provide the concrete benchmarking data for assessing one another's project participation in the peer evaluations.

d) To formalize the specifications and agreements documented in the charter, all team members must sign and date this contract prior to turning it in.

4. During the term:

This charter is a living document, and the roles and responsibilities specified herein are the benchmarks by which you and your team members will be assessing one another's performance at semester's end. **If any of the team member roles and responsibilities specified in this document change during the course of the term, revise the charter accordingly.**

Team Charter for Senior Capstone Design Project

0. Cover Page with signatures: The front page of the Team Charter must be the Signature page (see attached).

1. Team Purpose: State the reasons for this team's formation and the team's purposes. Who are your stakeholders, and what are their expectations of and for the team?

The purpose of the team is to design an advanced mask where the group can apply all the previous courses' knowledge. One of the design features is to create a mask that can be used in a longer-term than usual masks on the market. The mask also should contain a manometer that works on monitoring the pressure inside the mask.

The project stakeholder will be the NAU engineering department. The expectation for the team is to have a complete design ready by the end of the semester, so the group will have all the resources and search for that to be built in Capstone two next semester. The team was also required to have a prototype of the design ready to be presented during the semester.

2. Team Goals: What are the team's project, process, and quality goals? To what level of performance are team members willing to commit, and what course grade are you collectively aiming for? Articulating these goals will make a difference in your team's performance. *Write 2-3 paragraphs*

The team goal is to design an advanced mask that meets all the customer and engineering requirements. Staying within the budget and delivering a high quality design are the most challenges the team is going to face. However, as a team committing to work together with effort and by that the team can overcome all these challenges.

The team aims for getting the highest grade possible since they believe in themselves and creativity will help us achieve our goal at the end of the semester.

The process will start with a rough drawing with labeling all the parts and the size of the design. Then, searching for the right materials will be the second process. Finally, the cost of the parts and estimating the quantity of each part.

3. Team Member Personalities/Roles/Responsibilities: State each team member's personality style and what they can bring to the group. While some team responsibilities are shared by all members, collaborative teams work best when members also have unique roles and responsibilities. Consider these assignments carefully. Each of the following roles must be assigned to a team member (for smaller teams, some people will have multiple roles):

Each one of the team members has a role that is assigned based on their personalities. Some of the team members have worked together before in previous classes. That helped the team to assign each role with what fits each one and got the approval of all the team members.

Project Manager: (Abdullah Alshammari)

The project manager role for the entire semester will be Abdullah Alshammari. Abdullah got assigned to this role based on his efficiency in management, scheduling, and *providing a safe and welcoming team environment. The team believes that Abdullah is the right person for this task and will be an inspiring person for the whole team.*

Client Contact: (Jehad Alqubaisi)

Jehad Alqubaisi has worked with Dr. Travis last semester where he had a successful class; therefore, Jehad was assigned to be the client contact. Jehad is also good at articulating and summarizing the team points of contact in order to lay them out with the client. The group believes that Jehad can provide a good line of communication between the client and the group and can do a great job in the Client contact position.

Budget Liaison: (Sultan Alzahrani)

The budget Liaison for this semester will be Sultan Alzahrani. The group voted for Sultan to be responsible for budget liaison based on his experience in EGR386W since he was responsible for the bill of materials of his group. Sultan has the ability to record all purchases and updates the bill of materials.

Documents Manager: (Adi Alqurashi)

The document manager role for the entire semester will be Adi Alqurashi. Adi was assigned based on his high experience when it comes to CAD models, computer codes, and speed writing. The team believes that Adi is the right person for this role and will do his best to keep the team successful.

Website Developer: (Abdallah Alotaibi)

The website developer role for the entire course will be Abdallah Alotaibi. Abdallah was chosen because of his skills with technology. Also, the team has seen some of his projects regarding technology. The team believes in him as the right person for the position and he will be a good and helpful source when it comes to creating and updating the Facemask website.

Role Title	Role Description
Project Manager	Manages tasks, develops overall schedule, runs meetings, reviews individual contributions, provides safe and welcoming team environment, does NOT make all decisions (rather facilitates discussion of the team to arrive at team decisions)
Client Contact	Manages external communication (point of contact for client) All communication with the client must be through this person.
Budget Liaison	Oversees all purchases, main contact with Front office for budget management, monitors and records all purchases for budget tracking, updates Bill of Materials
Documents Manager	Maintains repository for all documents including CAD models, computer codes, standards, references and meeting minutes and agendas. Not the designated note-taker – that role should be rotated among the group.

Website Developer	Posts the group's work to the team's official website. All members are responsible to contribute content, and the website developer will decide how it is presented.

4. Ground Rules: How and when will this team meet? What are the norms and ground rules the team will agree to? How will you conduct discussions and make decisions? How will you handle dissenting views among members? How will you hold each other accountable for living by these rules and for task completion? What kind of participation and level of commitment do you expect from one another? *Write 3-4 paragraphs for this section.*

> *For the team ground rules, the team decided that all members are going to meet every Thursday at 3:30 pm to 4:30 pm via zoom. The team voted for this time based on team availability and was approved by all team members.*

> *For the ground rules, the team voted that every group assignment should be done* 2 days prior to the due date so as to get the documents reviewed. For each meeting one of the team members will record the meeting minute and agenda. All team Assignments will be submitted by Adi Alqurashi.

> For the project decisions, the team agreed to be made as a part of the group together with a majority in agreement. in case the team have a disagreement the individuals will provide additional research

5. Potential Barriers and Coping Strategies: What barriers to effective teamwork might potentially arise in the course of completing your senior project and other team obligations, and how will you handle them if they materialize? What problems with team dynamics have you experienced in the past, and how will you handle them if they come up again? *rite 3-4 paragraphs for this section.*

There are always barriers that face groups when they get assigned to one project. Some of the most common barriers are to have a member or a few members work more or less than the others. Another barrier is the Covid-19 crisis and its consequences.

Some other barriers that most of the members have faced in the past, is to have some students work more or less than others. This can make it unfair since all the members would get the same grade. Therefore, the Mask team has decided to do their best to divide the work evenly between all the members. In case someone is not participating equally as the others, the team would convert that to the member and let Dr. Travis knows. If this keeps happening with that member the team suggested to give him a low peer evaluation score.

It has been a challenging year for the whole world since Covid-19 has appeared. Many changes have to be done by the universe in order to deal with this crisis and have a successful semester. One change is giving the students an opportunity to study and complete this semester remotely. This will not allow the members to do all the parts that are usually assigned to them in regular semesters. For example, building the prototype. At this point all the members are currently located in New York; however, it can be hard for the team if someone decides to go back or leave NewYork. The group is

planning to cope and deal with this by trying to stay in one place and laying out this to the Client to have his suggestions in this matter.

Some other or new issues might accrue during the semester that would require some updates on this team contract. In the end, the group will do their best to solve the problems between them before it escalates, or it needs to be presented to the professor. The group hopes nothing will happen and hoping to have great work and experience together.

GROUND RULES FOR DIFFICULT GROUP DISCUSSIONS

Ideally, group discussions should be calm, focused conversations in which various ideas and opinions are considered, leading to useful, productive outcomes. But in the real world, many groups just can't pull this off. When members have conflicting interests, personal agendas, or aggressive personalities, meetings often deteriorate into angry conflicts, thereby wasting time and harming relationships.

If you anticipate that your group could head down this destructive path, try to get agreement on how the discussion will be conducted before leaping right into the issues. Unless they just enjoy anger and hostility, group members will usually agree to a reasonable set of Ground Rules. Then, if things start to get out of hand, the leader or facilitator can simply remind the wayward members of their previous agreement.

Although each group may have specific needs, the Ground Rules listed below are often useful. (These can apply to personal conversations as well.)

1. **Stay focused on the purpose and goals.** The group should clearly define what they hope to accomplish at the beginning of a discussion. This makes it easier to determine when people are getting off track.
2. **Listen when others are speaking.** During difficult discussions, people often mentally rehearse their next comment while someone else is talking, with the result that no one is really listening. When this happens, the conversation tends to turn into a pointless debate.
3. **Be sure that all viewpoints are heard.** Since most groups have both talkative and quiet members, efforts should be made to invite the quiet people to share their thoughts and keep the talkers from dominating the discussion.
4. **Consider different points of view.** People easily get "locked in" to their own opinions and don't even think about the possible merits of other ideas. Members need to be encouraged to think beyond their own point of view.
5. **Look for areas of agreement.** Argumentative group members often agree on more things than they realize. Before discussing disagreements, members should identify the things they do agree on.
6. **Discuss differences respectfully.** Hostile, insulting remarks add nothing to a group discussion and often permanently damage relationships. Members should be reminded about basic "good manners" for meetings.
7. **Remember that facts can be wrong, but opinions are just different.** Most of the time, people are not arguing about facts, but expressing differences of opinion. However, they often act as though their views are "right" and others are "wrong". It helps to recognize that they are simply different.
8. **Look for the good points in new ideas.** Useful ideas may get rejected when people are too quick to find flaws. By initially exploring the benefits of an idea, the group can avoid becoming overly critical.
9. **Focus on the future, not the past.** Disagreements can easily deteriorate into finger---pointing about past mistakes and problems, which accomplishes absolutely nothing. Use past experience to inform your decisions, but focus the discussion on future goals.
10. **Look for solutions, not someone to blame.** The worst debates about the past are those which involve placing blame. Any conversation focused on blaming is unproductive and should be turned into a search for solutions.
11. **Don't use group time for individual issues.** When two or three members start discussing their own issues in a group meeting, it just wastes everyone else's time. If this happens, the people involved should be politely asked to continue their personal discussion after the meeting.
12. **"Sidebar" any issues that are important but off---topic.** Occasionally, important matters are raised that have nothing to do with the goals of the meeting. To keep the group on task, but avoid losing the issue, create a "sidebar" where these topics can be listed and dealt with later.
13. **Agree upon specific action steps.** In most situations, members need to end the discussion with specific "next steps" that can be acted on after the meeting. Otherwise, the whole thing may turn out to be a waste of time.