

Project Team Charter
ME 476C: Senior Capstone Design

Signature Cover Page

By signing this document I fully understand that it is my responsibility to be the best teammate possible I can for my team. This means being on time and contributing to all meetings and work related to the project - which includes all course and client driven deliverables related to the team. I will not only complete my tasks as required but I will complete them on time (ahead of time if needed) and I will deliver material of the best quality to represent my team as a whole. Whenever needed, I will ask for help when I struggle, help my teammates when they struggle, and I will communicate clearly and directly on all issues related to the project.

If I do not contribute as required, I understand that my grade could be curved down for poor performance. Evidence of poor performance will be documented in peer evaluations and instructor observations throughout the semester. **Specifically, poor performance from two or more teammates in any given peer evaluation cycle will trigger a grade change on related team deliverables. Furthermore, instructor observations during staff meetings, lectures, and presentations can also trigger a grade change on team deliverables.**

Joshua Glenn

Print Name



Signature

Jonathon Walgren

Print Name



Signature

Dylan Lovato

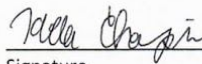
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Holden Chapin

Print Name



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Project Team Charter

Team Charter for Senior Capstone Design Project

1. Project Manager: *Identify who will be the team's project manager*

Dylan Lovato

2. 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 team was formed to create an inspiring kinetic sculpture to use to get people interested in mechanical engineering. The purpose of the team is to work work well together to make a sculpture that encompasses multiple engineering concepts that fulfils the requirements and allows the team to receive a high grade. The stakeholders of the project are the present and future staff and students of NAU. Their expectations of the team are to work well together and in a timely manner to create a "badass" kinetic sculpture.

3. 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.*

The team's goals are to make a functional and inspiring kinetic sculpture that works properly and excites present and future students about mechanical engineering. Because the team all chose this project as their #1 choice, they all wish to do an exemplary job on this project and receive a good grade as well (preferably an A).

4. 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. These could be technical and/or project management-related. The required positions for this course are: Budget Liaison, Client Contact, Website Developer, Project Manager, and Secretary/Document Manager. Develop other positions so that each person on the team has a defined role. Consider these assignments carefully. This information will constitute the benchmarking data for your end-of-term peer performance evaluations. Each team member must have a defined role and responsibility in the group.*

Each team member's Myers-Briggs personality results are as follows:

- Holden Chapin: INFP
- Joshua Glenn: ISFJ
- Dylan Lovato: INFP
- Jonanthan Walgren: ISTJ

Each team member feels like they can bring the following skills to the group:

- Holden Chapin: High level mathematical skill, in-depth Physics background, and creativity
- Joshua Glenn: Solidworks, organizational skills, leadership/people skills, and Materials Science
- Dylan Lovato: Matlab, Research, leadership/people skills
- Jonanthan Walgren: Real world experience, mechanical design, Solidworks

The team members have each associated themselves with the following required positions for this course:

- Budget Liaison: Jonathan Walgren
- Client Contact: Dylan Lovato
- Website Developer: Joshua Glenn
- Project Manager: Dylan Lovato
- Secretary: Holden Chapin
- Document Manager: Joshua Glenn
- Enforcer: Joshua Glenn
- Solidworks: Jonathan Walgren
- One to Turn things In: Holden Chapin
- At Home 3D Printer: Jonathan Walgren

5. 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? [Each team is required to meet at least once a week outside the allotted class time. It can be hard to coordinate schedules, so get it done early in the semester. All team members are expected to go to all team meetings.]*

The team will plan to meet at 10:15am on Mondays and Wednesdays. The ground rules and norms the team will agree to are: 1) do your work, 2) finish work early, 3) communicate. The team will communicate in person or through text/email primarily. The team will handle dissenting views among members by group discussion (“hash it out”). The team will hold each other accountable for living by these rules by having the Enforcer and Project Manager keep the group “in line”. The group requires a full commitment to every assignment and meeting possible and requires valid and reasonable explanations for any problems.

6. 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?*

The barriers to effective teamwork that might potentially arise in the course of completing the project and obligations are time commitments affecting meeting and workloads. The group will handle the barriers in a adult-like manner through use of better scheduling and time management skills. All group members have previously experienced negative group experiences such as bad communication, unwillingness to participate, and lack of knowledge on the project. If these problems arise with this group, the Project Manager and Enforcer will deal with the situation in a manner that is required.

7. Charter signed and dated by all team members and given to the instructor (legible signature, please!). Attach the following page to the front of your team charter.

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.