**Project Management Plan Guide**

Team Process Document

# What are we asking you to do?

You will need to work as a team to develop your team process structures and working patterns. You have been provided with some question prompts to guide the team discussion. Capture your responses and decisions in your team’s workspace. We encourage you to be open with each other and reference the class materials whenever possible.

# Materials

1. Team workspace – Students will utilize their SharePoint workspace as a repository for developing and documenting their project management plan deliverables throughout the design project.
2. Class materials – You can reference the class materials to generate ideas, activities, or strategies for your team.
3. Designer Empathy statement
4. Laptops

**Table of Contents:**

[Team Charter](#_heading=h.gjdgxs)

[Team Interaction Protocol](#bookmark=id.5oc2tjec4pz2)

[Team Roles](#bookmark=id.90ojqoi6lwo)

[Communication Protocol](#bookmark=id.f80tihh1t46z)

[Support Protocol](#bookmark=id.vfa1cy1rtx3o)

[Team Responsibility Tracker](#bookmark=id.uatj8mjnrxf2)

**ROLES:**

Team Process:

Notetaker (organize the documents/ keep track on the files): Tabitha (meeting minutes)

Timekeeper: Ethan

Attendance: Yiqun

Parking lot owner: Yiqun

Facilitator: Arielle (agenda, reminder)

Cost Coordinator:Yiqun

Ground rules:

Task Roles(temporary):

Technical roles:

Design Engineer (meeting requirements/ validation and verification):Yiqun(helper)

Mechanical (CAD): Yiqun, Emre

Electrical(breadboard?): Ethan, Tabitha (helper)

Programming(debugging/testing): Ethan, Arielle, Tabitha (3rd helper), Emre

Non-technical role:

Project manager: Arielle

Risk coordinator (track and document all the risks): Arielle, Ethan (helper)

Researcher (technical/context research): Yiqun, Ethan (helper), Emre

Communicator (send message and emails with stakeholders and team members): Tabitha

Presenter (pitching, presenting, studio check-ins): Arielle, Tabitha (helper), Emre

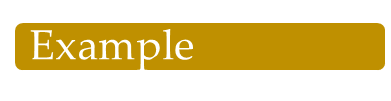
|  |  |
| --- | --- |
| Team Charter  * Efficiency (work together as a team, complete the work together as much as possible) * Commitment (make sure fair distribution of workload) * Respect (allow everyone to share their opinions) * Communication | agreement, business, businessman, businesswoman, client, colleague, communication, conference, connection, cooperation |

# Team Charter

The team charter will guide your teams to set goals together, outline shared values, shared vision, and clear expectations for how to work together with one another throughout the design project.  The charter can help the team develop a united identity, purpose, and objective that can also build team cohesion and motivate success.

Plan

1. Individual Worldview: Each member to complete this and share with the team.
   1. Introduce yourself to the team
   2. Share interesting fun facts about yourself with team members.
   3. What are your strengths (proficiency) as related to the team goal/project?
   4. What are your weaknesses (areas for improvement) as related to the team goal/project?
2. Team Name**:** Determine a name for your project team. Team members can also choose a codename and avatar that they would like to be associated with.
3. Team Goals: Determine your project team goals/objectives. Outline what you want to achieve together
4. Shared Values: What are some key values which you all agree on/share and will uphold together?
5. Motivations: Share the motivation for your designs with each other.



|  |  |
| --- | --- |
| **Team Name** | Team 1034A |
| **Team Goal** | TBA |
| **Shared Values** | Efficiency, commitment, respect, communication |

|  |  |
| --- | --- |
| **Team Member** | Yiqun |
| **Codename / Avatar** | Yiqun |
| **Proficiency** | CAD, programming, research, |
| **Area(s) for development** | design, project management, |
| **Duties** |  |
| **Responsibilities** |  |
| [**Roles**](https://web.stanford.edu/group/resed/resed/staffresources/RM/training/grouproles.html) | Contributor, Information Giver, Summarizer, Group Observer, Follower |
| **Motivation** | creative product |
| **Considerations** | only few experience, learn how to use these tools, live in toronto |

|  |  |
| --- | --- |
| **Team Member** | Ethan |
| **Codename / Avatar** | Ethan |
| **Proficiency** | Programming and electrical thingies. |
| **Area(s) for development** | CAD, stakeholder research, typing speed |
| **Duties** | see roles |
| **Responsibilities** | see roles |
| [**Roles**](https://web.stanford.edu/group/resed/resed/staffresources/RM/training/grouproles.html) | Contributor, Information Giver, Summarizer, Group Observer, Follower |
| **Motivation** | Have fun, creating a cool product |
| **Considerations** | Lives near toronto. No experience. |

|  |  |
| --- | --- |
| **Team Member** | Emre Cagin |
| **Codename / Avatar** | Emre |
| **Proficiency** | CAD in fusion, programming in Python and C, research |
| **Area(s) for development** | circuit building and testing |
| **Duties** | - |
| **Responsibilities** | - |
| [**Roles**](https://web.stanford.edu/group/resed/resed/staffresources/RM/training/grouproles.html) | - |
| **Motivation** | Efficient designs |
| **Considerations** |  |

|  |  |
| --- | --- |
| **Team Member** | Arielle Zhang |
| **Codename / Avatar** |  |
| **Proficiency** | Independent Research (academic papers hmm also stackoverflow), Programming/testing/debugging(python C#...), only ECE253 level hardware knowledge. CAD |
| **Area(s) for development** | Public speaking (comfortable doing but… not my strength), project management/leadership |
| **Duties** | See roles |
| **Responsibilities** | See roles |
| [**Roles**](https://web.stanford.edu/group/resed/resed/staffresources/RM/training/grouproles.html) | See roles |
| **Motivation** | Design for the best. Social equity. |
| **Considerations** | First-generation Canadian student. |

|  |  |
| --- | --- |
| **Team Member** | Tabitha Kim |
| **Codename / Avatar** | Tabitha |
| **Proficiency** | Research, organizing, note taking, a bit of programming (ESC180, ESC190, ECE253 knowledge) |
| **Area(s) for development** | CAD, project management |
| **Duties** | TBA |
| **Responsibilities** | TBA |
| [**Roles**](https://web.stanford.edu/group/resed/resed/staffresources/RM/training/grouproles.html) | TBA |
| **Motivation** | Efficiency, high quality |
| **Considerations** | Not much experience but down to learn |

|  |  |
| --- | --- |
| Team Interaction Protocol Working together on zoom, schedule on Tuesday or Wednesday.  Might have individual assignments that require work outside of the group-working time.  I guess we have time in StudioB to work together.  For emergencies or missed meetings/work, make sure to let everyone know in advance for coordination. |  |

# Team Interaction Protocol

Understanding team members' preferences and developing a team interaction protocol (individual styles, background, availability, personal goals) will help the team to build relationships, reduce conflict, and ensure that issues are revealed and solved properly and quickly.



1. Discuss your individual working preferences
   1. What would you like your team to know and put into consideration that could impact the team (location, personal information, issues, fear, concern, working style etc.)?
2. Determine how you plan on dealing with personal constraints, emergencies, holidays, absences, lateness, missing work
3. Identify some team building strategies

|  |  |
| --- | --- |
| Team Roles Roles(temporary):  Technical roles:  Design Engineer(meeting requirements/ validation and verification):Yiqun(helper)  Mechanical(CAD): Yiqun, Emre  Electrical(breadboard?): Ethan, Tabitha (helper)  Programming(debugging/testing): Ethan, Arielle, Tabitha, Emre (3rd helper)  Non-technical role:  Project manager: Arielle  Risk coordinator(track and document all the risks): Ethan (helper)  Researcher(technical/context research): Yiqun, Ethan, Emre (helper)  Communicator(send message and emails with stakeholders and team members): Tabitha  Presenter: Arielle, Tabitha, Emre (helper) |  |

# Team Roles

You are required to share the roles amongst the team members. Each team member is expected to take on at least one technical role and potentially multiple non-technical roles. For your design project, the technical roles are typically associated with scope management such as a design engineer. A team can have multiple design engineers with each team member focused on various aspects of product development (ex. mechanical, programming etc.) Consider leveraging your strengths, experiences, and prior knowledge. It is important to highlight that selecting one of these roles means that you are responsible for those aspects of the design project, and not necessarily that you are doing all the work for that aspect. For instance, the design engineer may handle a lot of programming as part of building the widget, but their primary responsibility is for the mechanical aspects. Also, the risk coordinator is responsible for documenting and tracking all the risks on the project but does not have to be the one identifying the risks all the time. Potential roles have been identified for managing the team and task processes in your Engineering Science Praxis III design projects below. Please note that these are not exhaustive as you can add roles that your team thinks are appropriate.



1. Each team member should identify roles, duties, and responsibilities to be taken up within the team.
2. Ensure that each member has roles related to both the team process and the task process. Each team member is expected to take on multiple roles.

|  |  |
| --- | --- |
| Communication Protocol Responsiveness: check the messages regularly on discord/instagram, do their own work properly and at time  Punctuality: show up on time.  Efficient communication: be prepared before each meeting, speak up when you feel necessary, don't be shy, we are here to listen. |  |

# Communication Protocol

The communication protocol will guide teams to establish communication standards, build a shared understanding and manage expectations in the project. ***The purpose is to understand expectations around effective team communication throughout the project. It describes how project information will be administered and distributed. Selecting suitable communication platforms and putting in place appropriate protocols for synchronous and asynchronous communications is important to effective teamwork.***

Plan

1. Determine meeting goals, meeting management roles and agree protocols
   1. Facilitator | Note taker | Timekeeper | Parking lot owner
   2. Meeting Agenda| Reminders | Meeting Notes | Attendance | Ground rules
   3. Meeting minutes – who & when
   4. Action items – owner & target date
2. Determine collaboration tools. Examples include:
   1. Scheduling: [Doodle](https://doodle.com/en/), [WhenIsGood](http://whenisgood.net/), Outlook Calendar, when2meet
   2. Time zone difference: [World Time Buddy](https://www.worldtimebuddy.com/), [Time Zone Converter](http://www.thetimezoneconverter.com/), [Timezone.io](https://timezone.io/)
   3. Task management: [Trello](https://trello.com/), MS project, [Notion](https://www.notion.so/), OneNote, [Asana](https://asana.com/), Excel, [Miro](https://miro.com/app/dashboard/), MS Teams Task Planner,
3. Agreed frequency of team communications - both formal and informal (e.g., email, Agorize, group chat etc.)
4. Determine how information will be documented, stored, and distributed to the team.
5. Determine how progress will be communicated.
6. Determine how communication issues will be addressed and escalated.

|  |  |
| --- | --- |
| Role Assignment  Notetaker: Tabitha (meeting minutes)  Timekeeper: Ethan  Attendance: Yiqun  Parking lot owner: Yiqun  Facilitator: Arielle (agenda, reminder)  I think we also need someone to organize the documents/ keep track on the files:  Cost Coordinator:  Ground rules: |  |

|  |  |
| --- | --- |
| Support Protocol How to support team members: Redistribute the work.  Help each other out.  Communicate. (Let each other know in advance) |  |

# Support Protocol

The support protocol will guide teams to maintain relationships, enhance inclusivity and build team cohesion. Team cohesion can be seen as the degree of connectedness and unity amongst team members with a common interest. Studies have shown that highly cohesive teams tend to be more united and more committed to success, which results in high performance. We recognize that building team cohesion within diverse teams working in global contexts can be delicate due to the diversity of backgrounds, personalities, cultures, worldview, interests, perspectives, lived experiences etc. Thus, we recommend that you work together to support, coach, and encourage each other to achieve your team goals.



1. Determine strategies for supporting team members.
2. Determine strategies for recognizing support from peers.

|  |  |
| --- | --- |
| Team Responsibility Tracker On github  Roles(temporary):  Technical roles:  Design Engineer(meeting requirements/ validation and verification):Yiqun(helper)  Mechanical(CAD): Yiqun  Electrical(breadboard?): Ethan, Tabitha (helper)  Programming(debugging/testing): Ethan, Arielle, Tabitha (3rd helper)  Non-technical role:  Project manager: Arielle  Risk coordinator(track and document all the risks): Ethan (helper)  Researcher(technical/context research): Yiqun, Ethan (helper)  Communicator(send message and emails with stakeholders and team members): Tabitha  Presenter: Arielle, Tabitha (helper)  Meetings:  Notetaker: Tabitha (meeting minutes)  Timekeeper: Ethan  Attendance: Yiqun  Parking lot owner: Yiqun  Facilitator: Arielle (agenda, reminder) |  |

# Team Responsibility Tracker

Your team is expected to maintain a responsibility tracker to monitor roles and responsibilities of members. You may find it helpful to track assigned roles and later update it to reflect the team member(s) who eventually completed the tasks.



1. Prepare a team responsibility tracker to monitor assigned roles and responsibilities of team members.
2. Regularly update the responsibility tracker for the first phase of the design project to keep track of your actual team roles and responsibility for the tasks related to the Design Proposal.

|  |  |
| --- | --- |
| Appraising Your Teams’ Performance Spend 10ish minutes at the end of the meetings to discuss if you have any concerns or want to “appeal” for decisions.   1. Reflection on your team experiences.    1. What went well?    2. What strategy was applied?    3. What challenges were encountered and how were they addressed? 2. Justification for your team decisions.    1. What was important?    2. What factors were considered?   How was inclusivity considered? |  |

# Appraising Your Teams’ Performance

Think and reflect on your team process, behaviors and decisions while working on your team charter, project roles, and communication protocols. Reflect on the reasons and considerations that factored into your team decisions. Also, think about the role of interpersonal empathy, inclusion, and authenticity in your team interactions. Remember to make connections to your design team experiences and interaction with others, which include your teammates, global team peers, global stakeholders, and other stakeholders as applicable. Here are some prompts to help you get started. You can use these as talking points to kick off the appraisal process.



1. Reflection on your team experiences.
   1. What went well?
   2. What strategy was applied?
   3. What challenges were encountered and how were they addressed?
2. Justification for your team decisions.
   1. What was important?
   2. What factors were considered?
   3. How was inclusivity considered?

(100 words minimum)

|  |  |
| --- | --- |
| Project Management Artefacts |  |

The underlisted project management artefacts are expected to have been developed. Initial draft should be in your team’s SharePoint workspace by the end of studio. It’s okay if they are not completed as you will be able to update them as you work on your design project.



1. Team Charter
2. Interaction Protocol
3. Team Roles
4. Communication Protocol
5. Support Protocol
6. Meeting Agenda
7. Team Responsibility Tracker
8. Team Appraisal (100 words minimum)

# Optional Readings

Cox, P. L., & Bobrowski, P. E. (2016). The team charter assignment: Improving the effectiveness of classroom teams. *Journal of Behavioral and Applied Management*, *1*(2), 789.

PMBOK® Guide (2021).

Sheridan, P. (2022). Effective Hybrid Teaming. Troost ILead, <https://ilead.engineering.utoronto.ca/files/2022/01/Effective-Hybrid-Teaming-Final.pdf>

Van Stephoudt B. B. & Mariotta B. A. (2011). Definition and Differences Between Team and Task Process. Massachusetts Institute of Technology. Accessed from <http://web.mit.edu/collaborationtbox/module3/team-task.pdf>