



Module 4.2 Ground Rules Examples

Ground Rule Instructions:

1. Generate a List of Ground Rules for your Team.
2. **Do Not Use** all of these Ground Rules.
3. Discuss and Agree on the Rules at your first team meeting.
4. **Do not** have one team member create your ground rules!
5. Discuss the ground rules you wish to add to your team's ground rules.
6. Post Ground Rules on Dropbox and include them in your first Weekly Progress Report for your faculty advisor to review.
7. Do not omit any category. You must have ground rules for all of the categories.
8. You will have to redo the ground rules if they do not explicitly lay out a system predicated upon System Thinking Theory.

******Choose one example and then edit the example to fit how you wish your team to perform**

Team Role Responsibilities: *This category of rules covers what is expected of the project leader during his/her rotation.*

Example #1: Project Leader Responsibilities

1. Project leader has primary responsibility for keeping in touch with the faculty and technical advisors and scheduling meetings with them.
 - a. Project leader is responsible for convening and facilitating a meeting at a team member or faculty's request.
2. Project leader is responsible for writing agenda for weekly team and faculty meetings and sending it out at least 24 hrs in advance.
3. During faculty meetings, the Project leader should report to the advisor previously formulated proposals and thoughts.
4. The project leader should facilitate meetings allowing each member to contribute to team discussions.
5. Project leader is responsible for reminding the group of upcoming deadlines, tasks, etc via e-mail.
6. Project leader will create Activity Lists (lab schedule; list of tasks to accomplish in lab, writing and other outside tasks) for the week. The lab schedule will be discussed and changed as team sees fit during team meetings and during lab as needed.
7. Project leaders will delegate tasks using the team's strengths and weaknesses. Team members may discuss and change tasks at the discretion of the Project leader.

8. The Project Leader is responsible for updating the team Google calendar and sending reminder emails to team members in a timely fashion.
9. The project leader mediates any "heated" discussions during team or faculty meetings or in lab.
10. The project leader also acts as a 'mediator' to mediate any conflict, difference of opinion, or argument that may arise during discussion.
11. The project leader does not have absolute authority and say over arguments or disputes.
 - a. Project leader must take into account different opinions and try to propose a middle ground that everyone agrees upon. In case of a conflict or argument that cannot be easily resolved, the team will vote using "majority rule." (see conflict management system)
12. The project leader will be responsible for doing the final edit to a written report before turning it in to faculty advisor or CI instructors.
13. Project Leader is responsible for organizing a discussion and creating an agenda about information being presented in Project Leader Transition Conference.
14. Project leaders will facilitate the team in following the ethical guidelines.
15. Make changes to ground rules when appropriate after discussion with the team.
16. Identifies team life cycle and implements proper maintenance tasks.

Example #2: Project Leader Responsibilities

1. Project Leader facilitates team and faculty meetings. Making sure the meetings stay relevant to the project and that every member, faculty advisor, and industrial consultant has time to voice their opinions.
2. Project leaders with the team will designate weekly time and place for the weekly team and faculty meeting.
3. Project leaders will schedule additional meetings as appropriate and when requested.
4. Project leaders will remind the team of important deadlines and tasks.
5. Project leader will keep in touch with faculty advisers and industry representatives as needed and schedule meetings with them.
6. Project leaders will present previously prepared group data, thoughts, concerns, and conclusions to faculty advisers during faculty meetings.
7. Project Leaders will create weekly task lists (Activity Lists) (lab schedule, writing assignments and any other pertinent tasks; to accomplish for the week) for the week and laboratory schedules for the team to use as a guideline. These should be discussed and approved by the team. They can be dynamic and are brought up for discussion during team meetings.
 - a. The lab schedule will be discussed and changed as team sees fit during team meetings and during lab as needed.
 - b. In case of dispute, final say on task delegation goes to the Project leader.
8. Delegate tasks needed to be done in the case of emergencies (e.g. when a member has valid reason for being unable to complete an assignment he previously was

delegated to do. 'Valid reasons' include, but are not limited to: confirmed illness, job interviews, internship interviews, death of a family member).

9. The Project Leader will create the agenda in advance, allowing a period of review from team members. They will then submit the final document 24 hours in advance and print for meeting attendees for weekly team and faculty meetings.
10. Project Leader is responsible for organizing a discussion and creating an agenda about information being presented in Project Leader Transition Conference.
11. Make changes to ground rules when appropriate after discussion with the team.
12. Identifies team life cycle and implements proper maintenance tasks.

Example #3: Project Leader Responsibilities

1. Facilitate team and faculty meetings.
2. Send out agendas for meetings 24 hours in advance to attendees.
3. Send e-mail reminders to the team of important deadlines from weekly activity lists.
4. Create activity lists for the team for lab and outside activities. List should include estimated times and task should be delegated to individual team members. Actual time should be archived so when task are delegated again the actual times are used instead of estimated times.
5. At team meetings make sure all team members understand the goals for the day/week.
6. Prepare for Project Leader Transition Meeting after discussing major points to include with team members. Create an agenda for the meeting.
7. Monitor timelines for milestones.
8. Take on additional responsibility should a team member be ill or have extenuating circumstances.
9. Delegate specific tasks to team members.
10. Ensures that assignments are on track with regards to due dates.
11. Mediate disputes between team members by following the Conflict Management ground rules system.
12. Discuss team process and motivational issues at each team meeting.
13. Always be aware of maintenance tasks associated with team life cycles and implement them.
14. Make changes to ground rules when appropriate after discussion with the team.
15. Identifies team life cycle and implements proper maintenance tasks.

Recorder Responsibilities: *This category of rules covers what is expected of the recorder during his/her rotation*

Example #1: Recorder Responsibilities

1. Set up and maintain Dropbox.
2. Team recorder should prepare and send meeting minutes 24 hours after each team meeting. Recorder will record all pertinent information from the meetings.

3. Recorder is responsible for making sure that data and other important things are updated and shared. Team members are responsible for recording data that they obtain. In the case that more than one person needs the lab notebook, the recorder is responsible for making sure that the original copy of all data (even if it's written on scrap paper) is attached securely into the lab notebook by the end of the day.
4. Recorder will be responsible for assembling the written report from the individual sections and distributing copies to all team members after the final edit.
5. Recorder will keep a neat and orderly lab notebook by following the instructions in the manual and in the ground rules.
6. Recorder maintains the Team Calendar, which contains the time and place of meetings, team's milestones, goals, and scheduling conflicts.
7. Recorder should organize and send Weekly Progress Report. All members will provide content for these reports.
8. Maintain Dropbox.
9. Maintain changes in the Logical Framework once submitted in Rotation 1.

Example #2: Recorder Responsibilities

1. Set up and maintain organization of Dropbox.
2. Prepare and send meeting minutes to the team via e-mail. This must be done within 24 hours after the end of the meeting. Corrections to the minutes will be submitted via email to the recorder and the team recorder will resubmit the minutes as necessary. Minutes will be used to create Weekly Progress Reports.
3. Maintain the team calendar, which includes: team milestones, goals, schedule conflicts, and the time & meeting place of meetings.
4. Recorder has authority over the lab booklet and assuring that it is clear, neat, and orderly. Record data if available. If not, delegate the task to another member and make sure the data is recorded.
5. Assemble class and project related documents to compile a central database. In particular, assemble individual project management answers for the Entrance Conference.
6. Upload relevant information for the team into Dropbox and maintain organization.
7. Sends out action items within 24 hours of the team meeting.
8. Organize and send Weekly Progress Report.
9. Maintain changes in the Logical Framework once submitted in Rotation 1.

Example #3: Recorder Responsibilities

1. Set up and maintain Dropbox.
2. Maintain the team calendar.
3. Make sure the notebook follows the instructions in the manual.
4. Team recorder should prepare and send meeting minutes 48 hours after each team meeting.
5. Recorder will record all pertinent information from the meetings.

6. Recorder records data if recorder is available. If multiple data sets are being recorded, the relevant person will record it.
7. Recorder will be responsible for assembling the written report from the individual sections and uploading to Dropbox for members to see.
8. Keep a neat and orderly lab notebook by following the instructions in the manual and in the ground rules.
9. Team members maintain their own calendars but submit changes to team calendar to recorder.
10. Recorder should organize and send Weekly Progress Report.
11. Maintain changes in the Logical Framework once submitted in Rotation 1.

Oral Presenter's Responsibilities: *This category of rules covers what is expected of the oral presenter during his/her rotation*

Example #1: Oral Presenter's Responsibilities

1. The student who is presenting should take the responsibility of preparing an outline of the contents and of the visual aids to be used and submitting to the team two week before the presentation.
2. The other team members will help to revise and polish the outline; help to design and prepare visual aids; and listen to the presenter practice the presentation and provide suggestions for improvement.
3. The presenter should refer to the manual on guidelines and tips for presentation.
4. Oral presenter will make slides; group members will help with layout and do editing.
5. The presenter should be prepared for the rehearsal with the CI instructor.
6. The team members will listen to at least two rehearsals before the real presentation.
7. All team members must also prepare for any possible questions that may be asked after the presentation.
8. Each team member will have a delegated subject to which they should be subject matter experts.
9. In faculty meetings, the oral presenter will present the previously prepared group thoughts/proposals to the advisor.

Example #2: Oral Presenter's Responsibilities

1. Oral presentations are primarily the responsibility of the oral presenter.
2. The team will meet to discuss the presentation, delegate responsibilities for helping create the presentation including help with slides and data presentation, and to help the oral presenter practice the presentation.
3. The oral presenter must practice the presentation in front of the team at least twice before the day the presentation is scheduled for. One of those must be at least three days before the scheduled presentation date.

4. All team members will actively participate in gathering information and creating slides.
5. The presenter has the task of recording data in the lab notebook and will transfer data into excel the same day the data was recorded.
6. This will enable the presenter to be most familiar with the data and results of experiments and allow for a better presentation.
7. All team members must also prepare for any possible questions that may be asked after the presentation.

Example #3: Oral Presenter's Responsibilities

1. Coordinate planning, organization, delegation of tasks, rehearsals, and execution of oral presentations.
2. Delegate appropriate slides/topics to be created by each team member.
3. Practice presentation two times (to his/her discretion) in front of other team members, faculty and CI instructor.
4. All slides and tables should be made at least 48 hours prior to presentation.
5. Responsible for compiling slides and organizing presentation by assigning tasks to other team members.
6. All team members must agree with content and organization of slides for presentation.
7. All team members should submit questions they think could be asked at presentation.
8. All critical analysis by faculty, CI instructors and others should be incorporated into the presentation by the oral presenter and presented to the other team members for final editing.
9. Dress appropriately for presentation.

Decorum and Ethical Guidelines: *These are general rules about how team members should treat one another and all people involved in the project. The team while executing the project will practice ethical standards.*

Example #1: Decorum and Ethical Guidelines

1. Listen to and understand each other's opinions and decisions.
2. Minimize unnecessary interruptions during meetings and while another person is talking.
3. No team member should be controlling/monopolizing the discussion. Everyone will have the opportunity to share opinions.
4. Inform other members of possible absences in advance.
5. A professional atmosphere should be maintained and distractions should be kept at minimum at meetings.
6. All members should be well-prepared before team and faculty meeting.
7. Everyone's opinions should be regarded as of equal weight.

8. Unethical and inappropriate manipulation of data will not be allowed.
9. All data submitted in any report whether a draft or final must be approved by all team members.
10. Cell phone use during meetings is unacceptable except for team business.

Example #2: Decorum and Ethical Guidelines

1. Team members should be polite and courteous.
2. No one should be controlling or monopolizing the discussion. All team members should feel comfortable to share opinions.
3. Team members should be well prepared before class, meetings and for any assigned task.
4. Any manipulation of data will not be tolerated. All data submitted in any report whether a draft or final must be approved by all team members.
5. Team members will not force other team members into something they are not comfortable doing. There will be an open discussion if someone feels uncomfortable or it can be discussed confidentially with the project management coordinator.
6. Team members must allow other members to speak and not interrupt them.
7. Changes in personal and team schedules must be announced to all team members.
8. All team members' ideas have equal weight.
9. There should be no interruptions in team meetings; cell phones should be put on silent. Cell phone use during meetings is unacceptable except for team business.

Example #3: Decorum and Ethical Guidelines

1. Members will speak in turn and respect others ideas and comments. But if one member is controlling discussion the project leader will inform him/ her to let others speak.
2. Interruptions during work/meeting time kept at a minimum.
3. Members are expected to maintain a formal atmosphere and to minimize distractions at team/faculty meetings.
4. Members will prepare for discussion prior to the meeting.
5. Each meeting will end with a summary of what has been covered and what still needs to be done/ assigned. (5 minute wrap up)
6. Everyone will listen to each other and not interrupt the person speaking. Each member has the opportunity to speak.
7. Plagiarizing is not acceptable; maintain academic integrity.
8. Unethical and inappropriate manipulation of data will not be allowed.

Effective Communication (Coalition Building): *These rules outline how to work as a team. They emphasize the need for good listening skills and open mindedness.*

Example #1: Effective Communication (Coalition Building)

1. Be prepared for the experiments, having read the necessary material and completed assigned work.
2. Spend a few minutes reviewing day's work prior to beginning experiments using the Activity List for the week.
3. Be open and nonjudgmental when communicating your ideas.
4. Use constructive criticism when you have a difference of opinion. In times of conflict, refer to the conflict management system.
5. Include all team members in discussions. Team members must be included in discussions and must contribute as much as possible to discussions.
6. Communicate any issues one might have, whether it is with the lab itself or issues with another team member, advisor, or teaching assistant.
7. Be conscious of the feelings and well-being of your team members and understand their strengths and weaknesses as well as their expectations.
8. Keep discussion focused on relevant topics.
9. Communicate with everyone whenever you are uncomfortable or unhappy with a certain task.
10. All team members must be aware of each week's activities and their own tasks to be accomplished and communicate when they are falling behind.
11. Team members must be attentive to what other members have to say and give them a chance to speak without interruption.
12. Team members must be courteous to other team members and refrain from using offensive language. Cell phone use is not allowed during meetings or in lab. All phones must be on silent.
13. Team members will communicate via email out of lab. All team members must check their email at least twice a day, once before 12 noon and once by 12 am.
14. If you will be unable to complete a task let other team members know ahead of time.

Example #2: Effective Communication (Coalition Building)

1. Project Leaders will delegate tasks evenly. If complications arise, Project Leader will delegate and mediate.
2. Team members will mutually keep track of deadlines and ensure one another are on the same page by communicating when you are falling behind on a task or if the task is too time consuming or less time consuming than expected.
3. Be prepared for all experiments, read necessary materials, and complete assigned work prior to lab.
4. Collaborate, and help each other out as needed. Similarly, ask for help if you need it.

5. Include all team members in discussions and email correspondences.
6. Be prepared for the experiments, having read the necessary material and completed assigned work.
7. Spend a few minutes reviewing day's work prior to beginning experiments.
8. Follow common courtesies (Golden Rule).
9. Be open and nonjudgmental when communicating. Use constructive criticism. Collaborate, and help each other out as needed. Share your thoughts and opinions with the team when helpful. Listen to what others have to say and give them a chance to speak without interruption. Consider ideas different from one's own and discuss relative merits.
10. Communication is vital, thus team members must constantly check email/phone messages and electronic collaboration spaces but at a minimum by noon and midnight every day.
11. Communicate any issues one might have, whether it is with the lab itself or issues with another team member, advisor or teaching assistant.
12. Be understanding of the abilities of other team members. Keep discussion focused on relevant topics.
13. Openly communicate any issues and complaints she/he may have about any lab issues, communication issues, task delegation issues, or other issues associated with instructor, advisor, or another team member.
14. Openly share thoughts and helpful feedbacks during team meetings, brainstorming, and lab planning.
15. Be honest and non-judgmental.
16. Collaborate to increase team efficiency and communicate often via email and Dropbox to make sure tasks are completed before the specified date for editing, discussion, and proofreading purposes.
17. Actively listen to others' opinions and allow everyone the chance to share thoughts without interruption.
18. Be understanding of the abilities, strengths, and weaknesses of other team members and help each other to improve.

Example #3: Effective Communication (Coalition Building)

1. Be prepared for the experiments. Read the necessary reading before meetings and labs.
2. Arrive on time to all meetings and labs. If there are ever cases when you are unable to do so, notify the team at least 24 hours beforehand.
3. Be open and nonjudgmental. Treat others with respect, understanding, and courtesy.
4. Collaborate and help each other.
5. Be comfortable with compromising.
6. Include all members in conversations and share ideas. Do not refute ideas without proper discussion. Use constructive criticism.
7. Keep focused to the topic at hand.

8. Communicate with team members the lab information and any special circumstances that may arise.
9. Each team member must devote a fair share of time to the development of the project.
10. Share data and information to the team in a prompt manner.
11. Share both works in progress and finished works with the team.
12. Team members should maintain a high level of respect amongst each other.

Weekly Meetings: *These are the general practices that should be used at all meetings including team, faculty and industry consultant.*

Example #1: Weekly Meetings

1. Minutes are used as record of tasks that need to be completed and topics we've already discussed to avoid being redundant.
2. Meetings will be scheduled at: see Team Meetings
3. Two hours a week must be set aside and kept free of obligations for team meetings. These times are: _____ (flexible, meetings may be added if needed)
4. A faculty meeting will be held weekly on:
5. Team meetings and faculty meetings will be held at the same time and place each week
 - a. Faculty meeting: time _____; place _____
 - b. Team meeting: time _____; place _____
6. In general, meetings should be efficient and last less than 1 hour and 15 minutes, unless circumstances arise. Time of meeting will be changed by unanimous vote only.
7. Project Leader is the facilitator at team and faculty meetings.
8. Faculty advisors will follow the team's ground rules for meetings. Read agenda before attending meeting.
9. Teaching Assistant will follow the Team's ground rules for meetings. Read agenda before attending meeting.
10. Members check in with each other at beginning of meetings. Interruptions during work/meeting time kept at a minimum.
11. If any person attending meetings attempts to monopolize the meeting, the Project Leader has the responsibility to redirect the discussion.
12. Inform of schedule changes in advance.
13. Members are expected to maintain a formal atmosphere and to minimize distractions at team/faculty meetings.
14. Members will be prepared for discussion prior to the meeting.
15. The Project Leader will end each meeting with a summary of what has been covered and what still needs to be done/ assigned.
16. Distractions will be kept to a minimum at team meetings. For example, no cell phone calls during meetings, unless it pertains to the project. However food and drinks are allowed unless the meeting is taking place in the lab.

17. Everyone will listen to each other and not interrupt the person speaking.
18. Each member will have the opportunity to speak.
19. Everyone's opinions are equal weight.
20. Project Leader will summarize key points at the end of each topic of discussion to make sure we are in agreement.
21. Speak effectively - don't waste time in meetings by repeating what is already been said or is irrelevant.
22. Only one minute tangents allowed.

Lateness and Absence: These rules outline the consequences of being late to or missing a meeting, without notification.

1. Being a few minutes late will be tolerated, but if one member is significantly late (without prior notification), he/she will buy the other members a tasty beverage.
 - a. If 10 minutes late to meeting, owe 1 scoop of ice cream to other members.
 - b. If 15 minutes or later to meeting, owes 2 scoops of ice cream to other members. Ice cream can be substitute for another sugary craving.
 - c. This rule does not mean that habitual lateness will be tolerated.
2. Attend all meetings and be punctual.
3. Be willing to add more meetings to schedule when necessary.
4. If a member misses a scheduled meeting and does not notify the group at least 24 hours in advance, that person will take orders for food and bring refreshments for the next team meeting.
 - a. Team members who are going to be late will call or e-mail other team members or faculty advisor.
 - b. Minutes will be taken for the late team member and given to them upon arrival.
5. Lateness is tolerated on occasion but chronic lateness will not be tolerated.
 - a. Valid Excuses for missing an assignment or a meeting are Job interviews, Graduate School Interviews, and Confirmed Illness.
 - b. Missing a meeting must be communicated to all involved in advance.
 - c. Other excuses are at the discretion of team members or all involved.
6. Chronic lateness will be reported to the project management coordinator.

Agendas: These rules set the formula for how the agenda will be written, presented at meetings, and distributed.

1. For all team and faculty meetings, the Project Leader will write an agenda 24 hours in advance and send to all participants and the Project Management Coordinator.
2. The agenda will be flexibly followed. General ideas will be covered without constraining interactions.
3. All team members will contribute to the agendas. Stay on topic and follow agenda.

Minutes: *These rules set the formula for how the minutes will be used by the team.*

1. The recorder will record all pertinent information from the meetings and send minutes to other members within 48 hrs.
2. If a team member is going to be late the recorder will take minutes and give these minutes to the late member upon arrival.
3. The Recorder will only take minutes when a team member is missing from a team meeting or a faculty meeting. These minutes will be sent to all team members within 24 hours by the recorder.

Example #2: Weekly Meetings

1. Team meetings will be held weekly
 - a. Time_____; Place_____
2. A faculty meeting will be held weekly
 - a. Time_____; Place_____
3. In general, meetings will last no longer than 1 hour, unless special circumstances arise.
4. Project leader facilitates the discussion at team and faculty meetings.
- 5.

Tardiness and Absence to Meetings: These are guidelines that outline the consequences of being late or absent.

1. If one is significantly late, he/she must send notification at least a day in advance unless it is an emergency.
2. Valid excused absence includes: sudden or chronic illness, job interviews, and graduate school interviews.
3. The first time a member is significantly late for a meeting, the group will warn that person. If the same member misses more than 2 times and does not heed the team's warning, the problem will be reported to the project management coordinator.
4. Being a few minutes late will be tolerated, but if one is significantly late (without notification in advance), he/she must buy the team tasty beverages based on the team's preferences.
5. If a member misses a meeting without prior notification, he/she must order refreshments for the next group meeting.
6. Minutes will be taken for the late member and given to him/her upon arrival. In case of absences, minutes will be distributed out within 24 hours after the meeting.
7. Chronic lateness will be reported to the project management coordinator.
8. Members will be prepared for discussion prior to the meeting.
9. The Project Leader will end each meeting with a summary of what has been covered and what still needs to be done/ assigned.
10. Distractions will be kept to a minimum at team meetings. For example, no cell phone calls during meetings, unless it pertains to the project. However food and drinks are allowed unless the meeting is taking place in the lab.
11. No interrupting.

12. Each member will have the opportunity to speak.
13. Everyone's opinions are equal weight.
14. Project Leader will summarize key points at the end of each topic of discussion to make sure we are in agreement.
15. Speak effectively - don't waste time in meetings by repeating what is already been said or is irrelevant.
16. Only one minute tangents allowed.

Agendas: These rules formulate how the agenda will be written, shared, and presented at meetings.

1. The project leader will email agendas out 24 hours before a faculty meeting to all participants and the Project Management coordinator.
2. During team meeting, all team members will contribute to the formulation of agenda for the next faculty meeting.
3. Teaching Assistant will follow the Team's ground rules for meetings.
4. Each team member should read and understand the agenda before faculty meeting.
5. During meetings, the team should stay focused and flexibly follow the agenda.

Minutes: These rules formulate how minute will be kept, distributed to, and used by team members.

1. The team recorder will record relevant information during faculty meetings and email out minutes to other team member within 48 hours.
2. In case a team member is absent, the team recorder will email out minutes within 24 hours after the meeting.

Example #3: Weekly Meetings

Team Meetings

1. Weekly meetings will be held on _____; Place_____.
2. We will meet for one hour to discuss any problems we are having in the laboratory. The team will also discuss the weekly activities created by the Project leader and agree on which activities to pursue. The team will discuss main issues and questions to bring up to the faculty advisor. This will be reflected through the Project leader's agenda for the faculty meeting.
3. Team members must be punctual to team meetings.
4. If a member is going to be absent, that member must inform other team members a day before the meeting.

Faculty Advisor Meetings: These are guidelines that should be considered during Faculty Advisor meetings

1. Weekly meetings with the faculty advisor will be held _____; Place_____.

2. Items on the agenda will be discussed at the meeting. The items are those pre-selected from the team meetings and each member can add to them 24 hours before the faculty meeting.
3. The project leader facilitates meeting.
4. The faculty will give as much input as necessary and will not take over the meeting.
5. Team members must be punctual to faculty meetings.
6. If a member is going to be absent, that member must inform other team members a day before the meeting.

CI Meetings:

1. Time _____; and Place_____ to be determined with CI Instructor.
2. Team members must be punctual to meetings.
3. Oral presenter facilitates meetings when it is their rotation.
4. If a member is going to be absent, that member must inform other team members ASAP.

Minutes: *These rules set the formula for how the minutes will be used by the team.*

1. The recorder shall prepare minutes within 48 hours after the meeting and circulate to all other team members.
2. In case one of the team member is absent at the meeting, the recorder shall circulate minutes within 36 hours after the meeting.

Example #1: Written Reports

Written Reports: *These are rules to help in the delegation and completion of written reports in a timely fashion and to the standards that the team has set down*
 The writing process can be personalized in order to optimize collaboration based on individual strengths and weaknesses and the knowledge of how each team member works best. This process should be carefully crafted based on the initial, open, honest discussion of individual weaknesses and strengths. **The three stages can be summarized as follows:**

Individual Work

- Allows for:
- Becoming familiar with the task
 - Digestion of ideas
 - Recognizing specific tasks that one can't yet accomplish alone
 - Coming up with clarifying questions

Group Work

- Allows for:
- Digestion of ideas
 - Propelling forward with new action plan, ideas
 - Having more tools and ideas at hand needed to accomplish task

Individual Work

- Allows for:
- Clarifying any questions
 - Making decisions
 - Exchange of ideas
 - Productively helping each other furthering the completion of task

Creating a scheduling format based on how your team will work most effectively allows for individual and group work to flow evenly. Example: As a team, the Project Leader scheduled the first individual stage on a weekend so that by Sunday evening at the time of their weekly team meeting, they could effectively transition into the group stage well prepared with ideas and questions and ready to make decisions about the rest of the week. This schedule leaves the weekdays when schedules are more hectic and meeting may be harder to complete the second phase of individual work. Scheduling writing in this three stage process allows for maximize productivity. The team also decided on a backup, alternate meeting time to be Monday based on this discussion, so that the flow of stages would not be interrupted.

It minimized wasted time since this process was the best way for all three of the team members to produce content. Beginning with individual research of what content needs to be included and individually solidifying concepts that needed to be understood meant the team did the bulk of brainstorming individually, which is the setting many engineers prefer, since from previous experience many of you know initial brainstorms can be unclear and ineffective if done in a group setting.

Creating individual outlines of what should be included in the progress report is very useful because it saves time at the team meeting; team members come prepared with a concrete outline of what they think is important to include in the report, and it is easier to create a master outline using the individual outlines as a sounding board. Using individual outlines facilitates the discussion. For example, if all team members include an idea in their individual outlines, it is obvious it is an important concept and it can be immediately added to the master outline. Individual outlines create discussions, for instance when one member thinks something is worth including and there is a difference of opinion about including the material. In such cases, each member collaborates by presenting their reasons for including this idea or not including the information and a unanimous consensus can be reached in a logical, respectful manner by referencing the overall objectives as a guide.

Collaborating on writing will be more efficient if workflow is already an implemented part of your Ground Rules. Building the collaboration process into the structure of your meetings creates a platform for open discussions and creating effective solutions. The one aspect that can make the implementation of this difficult is when lab results are not obtained by the date expected, and the process keeps getting pushed back and consequently less time is spent at each stage. However, sticking to the process even under time pressure helps because each member works best when there is a structure and logically planned agenda to work with. (Created by 2015 team)

Literature Search

1. The team will compile a list of topics to be researched. The Project Leader will then assign each member a topic to research.

2. Each member will use Mendeley to share relevant papers but is not expected to read the papers shared by her teammates.
3. Team members will supply summaries of the papers they read.
4. At team meetings, each member will report her weekly findings and educate the team on her assigned topic.

Logical Framework

1. The team will develop the logical framework and we will follow the framework. If plans deviate from the proposed logical framework, we will meet and discuss changing the logical framework.

General

1. The team will clearly delegate writing responsibilities. Each team member contributes towards writing delegated sections of papers, and reads over the final draft (revised by Final Editor) to ensure that all components are completed.
2. All team members should clearly understand the sections that they are to write, their mutual responsibilities, and the entire process by which the report will be prepared.
3. The team will draw up a writing plan and will meet to discuss content and establish timelines.
4. Written work should be finished at least 24 hours before the deadline, to provide time for editing and proofreading.
5. The final check of the report is critical and the editor will insure that terminology is consistent, tone is even, and the report is consistent and logical.

Entrance Booklet

1. The team will discuss and complete each of the required entrance booklet components prior to the entrance conference meeting.
2. The recorder is responsible for compiling all of the necessary information for the entrance conference in the Dropbox.
3. The team will agree on all aspects in the entrance conference.

Proposal

1. The proposal is written individually, but specific meetings will be held by the team to collaborate on content. All content will be agreed upon by the team and will be the same in the individual papers.
2. The content of the proposal will be discussed at the team meeting on _____.
3. The proposal must be written and emailed to all team members by _____.
4. The proposals will then be discussed prior to submission.
5. Team members must approve of your proposal before being submitted.

Weekly Progress Reports

1. The weekly memorandums will be written by the recorder and sent to all team members for review. Other team members will contribute to the content of the report.

2. The report will be sent out weekly no later than the day before the faculty meeting. It should be emailed to the team email address.

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1. The team will compile a list of topics to be researched. The Project leader will then assign each member a topic to research
2. Each member will use Mendeley to share relevant papers but is not expected to read the papers shared by her teammates.
3. Team members will supply summaries of the papers they read.
4. At team meetings, each member will report her weekly findings and educate the team on her assigned topic.

Logical Framework

1. The team will develop the logical framework and we will follow the framework. If plans deviate from the proposed logical framework, we will meet and discuss changing the logical framework.

General

1. The team will clearly delegate writing responsibilities. Each team member contributes towards writing delegated sections of papers, and reads over the final draft (revised by Final Editor) to ensure that all components are completed.
2. All team members should clearly understand the sections that they are to write, their mutual responsibilities, and the entire process by which the report will be prepared.
3. The team will draw up a writing plan and will meet to discuss content and establish timelines.
4. Written work should be finished at least 24 hours before the deadline, to provide time for editing and proofreading.
5. The final check of the report is critical and the editor will insure that terminology is consistent, tone is even, and the report is consistent and logical.

Entrance Booklet

1. The team will discuss and complete each of the required entrance booklet components prior to the entrance conference meeting.
2. The recorder is responsible for compiling all of the necessary information for the entrance conference in the dropbox.
3. The team will agree on all aspects in the entrance conference.

Proposal

1. The proposal is written individually, but specific meetings will be held by the team to collaborate on content. All content will be agreed upon by the team and will be the same in the individual papers.
2. The content of the proposal will be discussed at the team meeting on ____.
3. The proposal must be written and emailed to all team members by _____.
4. The proposals will then be discussed prior to submission.
5. Team members must approve of your proposal before being submitted.

Draft Final Report

1. The Draft Final Report will be written as a team. All team members should contribute equally in all stages of writing.
 2. Complete report 72 hours before deadline to allow time for editing. This will most likely be done on a Google doc where teammates write their individual parts but are able to view others' work and work simultaneously.
 3. Discuss content and outline by _____ and distribute tasks or divide the report to different sections.
 4. Meet on _____ and edit the report. Make sure all the different sections are coherent. The editing will be done collaboratively so that all members agree on content, style, figures...etc.
 5. Try and meet with the CI instructor or get feedback on Monday.
 6. Final revision and edits Monday night.
- **Note that this timeline could change if time allows to start earlier, but this is a rough guideline during busy weeks especially.

Final Report

1. The final report will be compiled by the Project Leader and submitted 24 hours before the faculty meeting.
2. Each team member is expected to contribute equally to write both draft and final reports.
3. Start preparing for final reports as early as possible for adequate discussion and revision.

Laboratory Notebooks

1. The recorder is responsible for neatly recording data in the lab notebook.
2. Keep only one notebook in active use at a time.
3. Keep detailed records of experiments by noting down all necessary information (i.e. problem statement, sketches or flow diagrams, objectives, observations, operating details, calculations, etc.)

Completion Report:

1. Written by the Project Leader and turned in the evening before the team's Exit Conference. The report will summarize team accomplishments, effective tools used, and feedback.
2. All team members will approve and contribute to this report.

Example #2: Written Reports

Literature Search: *What methods are used to gather information? How and where are sources compiled?*

1. All literature files uploaded to Dropbox should be accompanied by a summary written in your own words indicating their areas of relevance following the CI template. Any direct quotes from the article should be clearly noted.

2. Use Mendeley to compile citation data.
3. All team members are familiar with at least the summary files in the Literature Dropbox folder.
4. Readings to be assigned by the Project Leader in Activity Lists, and the initial papers recommended by the Faculty Advisor and Internal Consultant.
5. Schedule a team library consultation appointment the week before the Proposal is due, on _____ at _____.

Logical Framework

1. Logical framework will be set up as a team.
2. Important data and concepts will be discussed as a team.

General

1. Written reports will be written collaboratively by assigning specific sections to each team member. These will be distributed such that the workload is distributed evenly among the team members.
2. Team members will meet on February 22nd to make an outline of the work schedule as well as the outline of the proposal.
3. The content to be written in each section will be discussed by the entire team so that everyone understands what the expectations for each specific section are.
4. The rough draft of the report sections will be written in Google docs in order to ensure transparency of work and ease of access. Completed sections will be compiled by the recorder in an external word document that will be stored in Dropbox for further editing.
5. A separate folder in Dropbox will store the graphs, images and other illustrations that will go into the report.
6. Team members will finalize their assigned written work 72 hr before the deadline in order to give the team enough time to revise and edit.
7. Once a rough draft of a report is finalized, each team member will revise every section of the report to correct grammatical or technical mistakes.
8. The team editor will then revise the paper one last time to create the final draft. The team editor will be responsible for final grammatical, technical and stylistic revisions.
9. The entire team will then read the final draft to ensure that everything is up to the team's standards for submission.

Entrance Booklet

1. The team will discuss and complete each of the required entrance booklet components prior to the Entrance Conference meeting.
2. The recorder is responsible for compiling all of the necessary information for the Entrance Conference in the Dropbox.
3. The team will agree upon all aspects in the Entrance Conference.

Proposal

1. The proposal is written individually but specific meetings will be held by the team to collaborate on content and all content will be agreed upon by the team and will be the same in the individual papers.
2. The content of the proposal will be discussed at the team meeting on _____.
3. The proposal must be written and emailed to all team members by _____.
4. The proposals will then be discussed prior to submission.
5. Team members must approve of your proposal before being submitted.

Weekly Progress Reports

1. Weekly Progress Report will be written with the idea in mind that all team members in their individual and team reports will utilize the content.
2. Weekly Memorandum will be written by the recorder(s) and then forwarded to the rest of the team for editing and commentary.
3. Weekly Memorandum will start in the third week of the course.
4. The report will be send out weekly no later than the day before the meeting with your faculty advisor; upload to Stellar. The report is due even if the meeting is canceled for any reason. Although the recorder is responsible for writing the report, all members of the team should contribute to the content.

Draft Final Report

1. All general for major written work applies to this report.
2. Team will decide at last team meeting in Rotation 2 when the rough draft should be completed.
3. Once a rough draft of the report is complete, it will be sent to the teaching assistant and faculty for technical revisions.
4. At least one meeting will be held with the communication instructor for stylistic and effective communication revisions.
5. Notify team members when working on versions of the report on Dropbox to avoid file conflicts.
6. Each time, save a new draft and notify with a time stamp (day and time) indicating last version saved.
7. The Recorder will be in charge of arranging and deleting old versions of drafts to avoid clutter and confusion.
8. If the report is not completed 24 hours before the deadline, only minor changes will be made on the project rather than drastic ones to avoid the collapse of the paper.
9. For the report, the team will meet on _____ to review accuracy of contents.
10. For the report, the team will meet on _____ for group stylistic review of report and final content review.

Final Report

1. The final report will be compiled by the project leader and submitted no less than 24 hours before the faculty meeting.
2. Every member produces their own bibliography (in correctly cited format).

3. Each team member is expected to contribute equally to write both draft and final reports.
4. Start preparing for final reports as early as possible for adequate discussion and revision.

Completion Report (4 pages):

1. Written by the project leader and turned in the evening before the team's Exit Conference. The report will summarize team accomplishments, effective tools used, and feedback.
2. All team members will contribute and approve the report.
3. A team meeting will be held to collect information by the Project Leader.

Laboratory Notebooks

1. The recorder is responsible for neatly recording data in the lab notebook.
2. Keep only one notebook in active use at a time.
3. Keep detailed records of experiments by noting down all necessary information (i.e. problem statement, sketches or flow diagrams, objectives, observations, operating details, calculations, etc.)

Example #3: Written Reports

Literature Research

1. All members will conduct a thorough literature search for topics that are relevant to the project.
2. Each member will debrief the team about his research findings every time new information that is pertinent to the project is discovered.
3. Each member will submit the literature that he has read to the Dropbox in order to compile a research database. This will maximize the amount of papers read by the team by avoiding team members reading the same paper.
4. Each team member will also make notes regarding the literature in the Mendeley folder shared with the communication instructor.

Logical Framework:

1. Utilize the information in the Logical framework as the plan for the proposal and for milestones for the project.
2. Discuss weekly at team meetings.
3. Make changes as project develops.
4. Use to prevent scope creep and discuss the scope expansion problems with faculty advisor.

General

1. Documents written by the team will be discussed and the basic content will be discussed prior to writing at team meetings.

2. All major documents including the mid-term progress report and final report will have dedicated meetings for content, timeline, and writing discussion.
3. The team will assign a Final Editor, who will ensure that terminology is consistent, tone is even, and the report is consistent and logical. The editor should receive all parts within 5 days before the deadline.
4. The team should plan to have a near-final draft within 2 days of the deadline. After that, only superficial edits should be done.
5. Writing will be divided into sections.
6. Be honest while recording and analyzing data.
7. The team will follow firm deadlines to ensure that all weight is born equally.

Entrance Booklet

1. The team will discuss and complete each of the required entrance booklet components prior to the entrance conference meeting.
2. The recorder is responsible for compiling all of the necessary information for the Entrance Conference in the Dropbox.
3. The team will agree on all aspects in the Entrance Conference.

Proposal:

1. All scientific content will be agreed upon by the team and will be the same in the individual papers.
2. The content of the proposal will be discussed at the team meeting on _____.
3. The proposal must be written and emailed to all team members by _____.
4. The proposals will then be discussed prior to submission.
5. Team members must approve of your proposal before being submitted.

Weekly Progress Reports

1. Recorder writes the Weekly Progress Reports and will send to the rest of the team for editing and commentary.
2. Sent 24 hours before meeting with faculty advisor. The report is due even if the meeting is canceled for any reason.
3. The recorder will upload to Stellar 24 hours in advance of faculty meeting.

Draft Final Report

1. An outline will be created for the report on _____ at the team meeting.
2. The report draft will be complete by midnight on _____.
3. The report will be written collaboratively in Google documents.
4. Project Leader will delegate content to be written and described.
5. The team will review and discuss report in person on _____ at the faculty meeting.
6. All edits will be submitted by _____ at midnight.
7. On _____, all team members will read the report and confirm or make last changes.
8. The editor will be decided at the first team meeting about the report.

9. Recorder is responsible for uploading the final version of the report.

Final Report:

1. A Draft final report will be written.
2. The final report will be compiled by the project leader and submitted no less than 24 hours before the faculty meeting.
3. Once the report has been edited, all team members must read the report and give feedback. B and C should be done at least twice.
4. The Final report should be completed at least three days before it is due.

Laboratory Notebooks

1. If data is recorded somewhere that is not the lab report, original document will be promptly stapled to laboratory notebook and the contents of the original document will be transcribed onto the laboratory notebook as a backup. This will be signed and acknowledged by supervisor.
2. The recorder will be in charge of the upkeep of the laboratory notebook.
3. The recorder will ensure that the team members are following directed protocol.
4. There will be only one active notebook at a time.
5. Team members will organize the lab notebook according to the instructions in the course manual to ensure consistency and ease of understanding.
 - a. Starting a new experiment
 - i. Experiment's Goal: What is the purpose of the experiment?
 - ii. Daily Goal: What do we want to accomplish today?
 - iii. Methods: Summary of experimental design and execution.
 - iv. Daily Actions: Specific experimental procedures to be performed that day.
 - v. Materials: Any specific equipment required for the particular step. Chemical information such as batch no and manufacturer will be recorded.
 - vi. Experimental data to be recorded (numerical and observations).
 - vii. Calculations
 - viii. Summary of day's work
 - ix. Next Steps
 - b. Continuing a current experiment
 - i. Daily goal: What do we want to accomplish today?
 - ii. Daily Actions: Specific experimental procedures to be performed that day.
 - iii. Materials: If an instrument or chemical was used for the first time that day, record reference information.
 - iv. Experimental data to be recorded
 - v. Calculations
 - vi. Summary of day's work
 - vii. Next Steps
 - c. Starting a New Page
 - i. Write date, experiment number, and subject at the top of the page.

Completion Report (4 page limit)

1. Written by the project leader and turned in the evening before the team's Exit Conference.
2. The report will summarize team accomplishments, effective tools used, and feedback.
3. All team members must agree with what is written in the report.
4. A team meeting will be held by the project leader to discuss the content of the report.

Example #4: Written Reports

Literature Research

1. All members will conduct a thorough literature search for topics that are relevant to the project.
2. Each member will debrief the team about his research findings every time new information that is pertinent to the project is discovered.
3. Each member will submit the literature that he has read to the Dropbox in order to compile a research database. This will maximize the amount of papers read by the team by avoiding team members reading the same paper.
4. Each team member will also make notes regarding the literature in the Mendeley folder shared with the communication instructor.

Logical Framework:

1. Utilize the information in the Logical Framework as the plan for the proposal and for milestones for the project.
2. Discuss weekly at team meetings.
3. Make changes as project develops.
4. Use to prevent scope creep and discuss the scope expansion problems with faculty advisor.

General:

1. Each written report will have meeting for discussion of content, task delegation, and timeline for compilation and editing.
2. **The team will set up meeting times and draw up a plan.** The team should meet at least a week before the deadline to delegate tasks and create an internal timeline.
3. **The team will delegate tasks and responsibilities.** All team members must clearly understand the part they are writing and stick to the internal timeline.
4. **The team will assign a final editor.**
5. The project leader will read through the final report and give his/her proof of the report before submission.
6. A final editor will be selected based on writing strengths and weaknesses.
7. Everyone must finish his/her share of work 3 days in advance for compilation and editing purposes.

8. The final report should be ready for submission at least 12 hours in advance. The team will avoid furiously trying to finish the work the night before it is due.
9. Unethical and inappropriate manipulation of data will not be allowed.

Entrance Booklet

1. The team will discuss and complete each of the required entrance booklet components prior to the entrance conference meeting.
2. The recorder is responsible for compiling all of the necessary information for the Entrance Conference in the Dropbox.
3. The team will agree on all aspects in the entrance conference.

Proposal:

1. The proposal will be written as individuals; however, meeting will be held for discussion of content and data analysis.
2. The team will agree on the results and the same data/result will be used in individual papers.
3. The content of the proposal will be discussed at the team meeting on _____.
4. The proposal must be written and emailed to all team members by _____.
5. The proposals will then be discussed prior to submission.
6. Team members must approve of your proposal before being submitted.

Weekly Progress Reports:

1. The team recorder will be in charge of writing the Weekly Progress Report.
2. The weekly report will be uploaded onto Dropbox 2 days in advance of the faculty meeting for group editing and commentary.
3. The weekly memorandum will be uploaded to Stellar no later than 24 hours before the faculty meeting. Even if the meeting is canceled, it should still be sent out nevertheless.
4. During team rotation, the previous recorder will write the first Weekly Progress Report.

Draft Final Report:

1. Because our project has three main tracks, each team member will be responsible for writing about their respective track.
2. Each team member is expected to contribute equally to the report.
3. Individual pieces of the report will be completed by noon on _____.
4. The Project Leader will combine the pieces of the report and present the compiled version to the team by noon on _____.
5. The team will meet on _____ to discuss the entire document, and make any edits.
6. The final version should be completed by _____.
7. The Recorder will be responsible for uploading the report.

Final Report:

1. Final Report will be compiled by the project leader at least 3 days in advance, and turned in no less than 24 hours in advance.
2. Each team member is expected to contribute equally to write both draft and final reports.
3. Start preparing for final reports as early as possible for adequate discussion and revision.

Completion Report:

1. Written by the project leader and turned in the evening before the team's Exit Conference.
2. The report will summarize team accomplishments, effective tools used, and feedback.
3. A special meeting will be held to discuss the contents of the report
4. An outline will be created to cover everyone's ideas.

Laboratory Notebooks

1. The recorder is responsible for neatly recording data in the lab notebook.
2. Keep only one notebook in active use at a time.
3. Keep detailed records of experiments by noting down all necessary information (i.e. problem statement, sketches or flow diagrams, objectives, observations, operating details, calculations, etc.)

Example #5: Written Reports**Literature Research**

1. All members will conduct a thorough literature search for topics that are relevant to the project.
2. Each member will debrief the team about his research findings every time new information that is pertinent to the project is discovered.
3. Each member will submit the literature that he has read to the Dropbox in order to compile a research database. This will maximize the amount of papers read by the team by avoiding team members reading the same paper.
4. Each team member will also make notes regarding the literature in the Mendeley folder shared with the communication instructor.

Logical Framework:

1. Utilize the information in the Logical framework as the plan for the proposal and for milestones for the project.
2. Discuss weekly at team meetings.
3. Make changes as project develops.
4. Use to prevent scope creep and discuss the scope expansion problems with faculty advisor.

Written Reports

1. Documents written by the team will be discussed and the basic content finalized will be discussed prior to writing at team meetings.
2. Timelines (and deadlines) will be made and followed.
3. Work will be evenly distributed after discussion by all team members.
4. Editing will be evenly distributed.
5. Project Leader will be in charge of final check-up and reminder if something has not been properly completed/ if work is sub-par and delegate responsibilities accordingly.
6. Compilation and editing of document should be completed prior to the deadline.

Entrance Booklet

1. The team will discuss and complete each of the required entrance booklet components prior to the entrance conference meeting.
2. The recorder is responsible for compiling all of the necessary information for the Entrance Conference in the Dropbox.
3. The team will agree on all aspects in the entrance conference.

Proposal

1. Agree on the potential experimental paths and procedures to achieve team's goals.
2. Share useful literature (graphs, reaction pathways, process diagrams) for effective presentation.
3. The content of the proposal will be discussed at the team meeting on _____.
4. The proposal must be written and emailed to all team members by _____.
5. The proposals will then be discussed prior to submission.
6. Team members must approve of your proposal before being submitted.

Weekly Progress Report

1. The recorder will be in charge of submitting weekly progress report, and team members should contribute to the content.
2. All team members should check the weekly progress report before the recorder uploads the report to Stellar 24 hours in advance of the faculty meeting.

Draft Final Report

1. The team will decide on _____ what day they will submit the draft.
2. An outline for the report will be done at a team meeting on week ____.
3. Sections will be decided/predicated upon each person strengths or weaknesses.
4. The Project Leader is the editor for the draft and final report. The team will decide who will edit the data analysis and the graphs.
5. The draft of the progress report will be submitted to the CI instructor, allowing 1 week for feedback from the instructor and time for revision.
6. The Project Leader will compile the report and submit it no less than 24 hours before the faculty meeting.
7. The report will have total team approval for submission at least two days before it is due.

Final Report

1. The project leader will be in charge of compiling and submitting no less than 24 hours before the faculty meeting.
2. Each team member is expected to contribute equally to write both draft and final reports.
3. Start preparing for final reports as early as possible for adequate discussion and revision.
4. Extracurricular activities, UROP commitment, and other course work should not be the excuses for not contributing equally.

Laboratory Notebooks

1. The Recorder will be in charge of updating the notebook for each laboratory session and follow specific rules to keep neat, complete and clear notebook. (Rules from course manual)

Completion Report (4 page limit):

1. Written by the project leader and turned in the evening before the team's Exit Conference.
2. The report will summarize team accomplishments, effective tools used, and feedback.
3. All the team members must agree upon all information.
4. A special meeting will be held to discuss the report with an outline being provided by the Project Leader.

Conflict Management System: *These are basic guidelines on how to deal manage conflict and disagreements ethically within the team.*

Example #1: Conflict Management System

1. If conflicts were to arise, team members should first try to listen and understand each other and settle the conflict.
2. Be aware of team members' conflict styles and your own during disagreements.
3. If conflict were to persist, the team should go to the project management coordinator for further mediation and negotiation.
4. Conflict with faculty advisor and teaching assistant should be discussed as a team and the project management coordinator.
5. Actively Listen and evaluate each other's opinions and criticisms.
6. The project leader should mediate any disagreement and heated discussions.
7. Each team member should be willing to compromise.
8. Conflict brought to the attention of the project management coordinator should be kept confidential.
9. Be aware of team members' conflict styles and your own during disagreements.
10. Only voice concerns relevant to the project.
11. Try to understand each other's motives before getting confrontational.

Example #2: Conflict Management System

1. Communicate with everyone whenever you are uncomfortable or unhappy with a certain task.
2. Be aware of team members' conflict styles and your own during disagreements.
3. Actively listen to each other's opinions/criticisms.
4. Summarize agreements and disagreements, and then make decisions.
5. Team members should discuss problems with each other before going to faculty advisor.
6. Defer to judgment of project leader if conflict cannot be resolved.
7. If outside conflicts become too cumbersome, discuss with TA then faculty advisor, then project management coordinator (everything will be kept confidential).
8. Conflicts with TA or faculty advisor should be discussed as a team with the project management coordinator.

Example #3: Conflict Management System

1. Be aware of team members' conflict styles and your own during disagreements.
2. Summarize agreements and disagreements and then make decisions.
3. Team members should discuss problems with each other before going to faculty advisor.
4. Be open to constructive criticism. Respect each other's opinions and criticism. Be willing to make compromises.
5. If a heated discussion occurs, Project Leader will mediate, after all team members having taken a step back to cool down before continuing discussions.
6. Be willing to make compromises. Compromises are not sufficient. We will instead strive for collaboration.
7. Only challenge each other in meaningful ways.
8. Respect each team member.
9. Understand each other's motives before getting confrontational.
10. Conflicts with TA or faculty advisor should be discussed as a team with the project management coordinator.
11. Conflict within the team that cannot be settled by the Project Leader should be brought to the project management coordinator.
12. Disagreements amongst team members should be brought to project management coordinator for settlement and remain confidential.
13. Refer to Mission Statement and Team Expectations.

Example #4: Conflict Management System

1. Communicate with all team members when you are uncomfortable or unhappy with a specific task.
2. Be aware of team members' conflict styles and your own during disagreements.
3. Summarize agreements and disagreements, then form a decision together.

4. Do not just let a disagreement go unresolved.
5. Be willing to make compromises.
6. Team members should discuss/work out problems with each other before going to faculty advisor.
7. If conflict cannot be resolved between team members: If unresolved conflict arises between two team members, third team member should help settle it (majority rules).
8. If unresolved conflict arises among all three team members, discuss (together, as a team) with TA or faculty advisor.
9. If still irresolvable, discuss together with project management coordinator.

Lab/ Outside Work: Lab Sessions: *These rules are guidelines for how to prepare for and utilize a lab session.*

Work and Work Distribution: *These are guidelines for how create an equitable division of work between the team members while making sure that each team member works on and learns every aspect of the project. These also outline how to go about actually performing your individual work.*

Example #1: Lab/ Outside Work

1. The group must agree on work distribution, assigned tasks, and set deadlines. All tasks will be distributed fairly; everyone will do assigned tasks on time. Work as a team to meet all deadlines.
2. Rotate positions, so that all can develop necessary lab skills.
3. Arrive on time to the lab or communicate conflicts in advance.
4. Hand assignments in on time.
5. Delegate equal task distribution over the entire term rather than weekly and make the distribution dependent upon each team member's outside work commitments.
6. Prior commitments and the team's priorities will be the over riding criteria for equal work distribution.
7. Perform duties of role to best of ability. If you don't understand to do something, check with team members or advisors before you start.
8. If a team member forgets his/her task, the others will remind him/her. If the same member continuously forgets, a tasty beverage/fancy dessert will be in order.
9. Assigned task must be completed by meeting times. Start work early. Keep in mind that the primary focus of the team is work.
10. If 2 of 3 members decide they need to stay late or come in another time and the third member can make this time, all three must show up if necessary.
11. Background reading that is assigned at team meeting for upcoming week and all members are expected to read assigned readings.
12. Remain in agreement about what needs to be done before leaving lab.
13. Activity Lists will be formulated utilizing strengths and weaknesses and individual expectations of team members and will be created on a weekly basis by the Project

Leader and updated by the Recorder and attached to the Weekly Progress Report for everyone's perusal.

Example #2: Lab/ Outside Work

1. The group must agree on work distribution, assigned tasks, and set deadlines. All tasks will be distributed evenly; everyone will do assigned tasks on time. Work as a team to meet all deadlines.
2. Arrive on time to the lab.
3. Delegate equal task distribution over the entire term rather than weekly and make the distribution dependent upon each team member's outside work commitments.
4. Team members will submit schedules of outside prior commitments for the term at the first team meeting and it will be updated as changes occur. Prior commitments and the team's priorities will be the overriding criteria for equal work distribution.
5. If a team member forgets his/her task, the others will remind him/her. If the same member continuously forgets, the others will take up the issue with the Project Management Coordinator.
6. Plan experiments in advance of lab time. Perform data analysis outside of lab.
7. Accomplish tasks with no more than the necessary number of man-hours.
8. Background reading will be assigned each week at team meeting for the upcoming week and all members are expected to read this.
9. Remain in agreement about what needs to be done before leaving lab.
10. Activity Lists will be formulated utilizing strengths and weaknesses and individual expectations of team members and will be created on a weekly basis by the Project Leader and updated by the Recorder and attached to the Weekly Progress Report for everyone's perusal.

Example #3: Lab/ Outside Work

1. The team must be focused on the long-term goal and short-term goal of the lab project.
2. The team roles are rotated once a while to help each individual gain the necessary skills of a leader, a recorder, and an oral presenter.
3. Each team member should hand assignment in on time and follow the team calendar accurately.
4. Work should be distributed fairly and reasonable. Accommodations can be made for unexpected/special situations.
5. Each member should arrive to the lab on time and go through the Activity List for that day.
6. If change of schedule occurs, team members should contact the project leader immediately.
7. If a team member forgets his/her task, others will remind him/her. However, if the same member continuously forgets, he/she should be read to order refreshments for the group at the next team meeting.

8. If the majority of the team believes that it is necessary to come in for an additional lab session and remaining team member can make to the time, all team member must show up for the lab session.
9. Tasks should be delegated according to the strengths and weakness of each team member.
10. Deviations from the planned activities must be agreed on by all team members.
11. Set up should not take more than 30 minutes and clean up will take place 30 minutes before the end of lab.
12. If it is necessary to stay later than 5 pm, two of the three members must stay to conduct experiments. Staying after 5 pm will be voluntary and will be agreed up by all team members.
13. It is expected that team members will volunteer to pick up extra assignments/tasks if their schedule allows and if they are willing.
14. Activity lists will also be created keeping individuals strengths and weaknesses and whether team members would like to develop their weaknesses.
15. The team must be focused on the long-term goal and short-term goal of the lab project.
16. Each team member should hand assignment in on time and follow the team calendar accurately.
17. Work should be distributed fairly and reasonable. Accommodations can be made for unexpected/special situations.
18. If change of schedule occurs, team members should contact the Project Leader immediately.
19. If a team member forgets his/her task, others will remind him/her. However, if the same member continuously forgets, he/she should be read to order refreshments for the group at the next team meeting.

Example #4: Lab/ Outside Work

1. The group must agree on work distribution, assigned tasks, and set deadlines. All tasks will be distributed evenly; everyone will do assigned tasks on time. Work as a team to meet all deadlines.
2. Attempt to distribute work fairly. Even distribution of work over the course of the term.
3. Rotate positions, so that all can develop necessary lab skills.
4. Arrive on time to the lab or communicate conflicts in advance.
5. Hand assignments in on time.
6. Delegate equal task distribution over the entire term rather than weekly and make the distribution dependent upon each team member's outside work commitments.
7. Team members will submit schedules of outside prior commitments for the term at the first team meeting and it will be updated as changes occur. Prior commitments and the team's priorities will be the over ridding criteria for equal work distribution.
8. Perform duties of role to best of ability.

9. If a team member forgets his/her task, the others will remind him/her. If the same member continuously forgets, a tasty beverage/fancy dessert will be in order.
10. Start work early so assigned tasks are completed by meeting time.
11. Keep in mind that the primary focus of the team is work.
12. If 2 of 3 members decide they need to stay late or come in another time and the third member can make this time, all three must show up then.
13. Background reading will be assigned each week at team meeting for upcoming week and all members are expected to read this.
14. Remain in agreement about what needs to be done before leaving lab.
15. Activity Lists will be formulated utilizing strengths and weaknesses and individual expectations of team members and will be created on a weekly basis by the Project Leader and updated by the Recorder and attached to the Weekly Progress Report for everyone's perusal.

Safety: *These are rules to codify how the team will follow through on safety in the laboratory in compliance with MIT regulations.*

Example #1: Safety

1. Check team members before going into lab for meeting Safety Requirements (long pants, closed shoes).
2. All team members must complete and understand the new policies on environmental safety before beginning their project.
3. All Team members will adhere to the following Overall Safety Rules in all laboratory work:
 - a. Eye protection is required at all times in the laboratory and where chemicals are stored and handled.
 - b. Horseplay, pranks, or other acts of mischief are especially dangerous and are absolutely prohibited.
 - c. Work only with materials when you know their flammability, reactivity, corrosiveness, and toxicity.
 - d. Laboratory areas should not be used as eating or drinking places.
 - e. Unauthorized experiments are prohibited.
 - f. Confine long hair and loose clothing when in the laboratory. Men should remove neckties.
 - g. Mouth suction should never be used to fill pipettes, to start siphons, or for any other purpose.
 - h. Never perform experimental work in the laboratory alone.
 - i. A TA or a staff must be around when students are in the lab. Know how to shut down your experiment if the alarm sounds.
 - j. A complete copy of the safety regulations will be referred to whenever any question about safety in regard to our project is questioned by a team member or anyone else associated with our project.

4. Cleanup and Checkout

The team will do laboratory Cleanup and Checkout on the last day of class. When the cleanup is complete, lab instructor will inspect, approve, and sign the team out. The team will consider the following during the cleanup:

- a. Glassware should be cleaned and dried and returned to the proper storage area.
- b. Tools and equipment should be returned to the location they came from.
- c. If you borrowed anything from another lab, please return it.
- d. If you have equipment that needs attention, please notify lab instructor, or a TA.
- e. Discard all items that are not likely to be reused.
- f. Use CAUTION when disposing of chemicals. Be sure that every container is clearly identified with its contents, full names only, no abbreviations or formulas.
 - i. We have special tags and forms that need to be filled out for the disposal of chemicals. Please ask if you have any questions about mixing, compatibility, or proper disposal method. Check the MSDS for chemicals used.
- g. Dispose of sharps only in proper containers.
- h. Clean the top of your bench. Remember that you started with a clean bench, and you should leave it clean.

Example #2: Safety

Safety: The following guidelines give code for safety.

Follow the Overall Safety Rules in all laboratory work that are outlined in the Course Manual:

1. Goggles must be worn at all time in the lab.
2. No pranks and jokes during lab hours.
3. Make sure to check material's characteristics before using.
4. No food or drink allowed.
5. Wear loose clothing all the time.

Each team member will clean up lab area during cleanup:

1. Tools should be returned to proper location.
2. Dispose sharps to proper container.
3. Be cautious when disposing chemical in the container. Make sure the container has correct labeling.