

Welcome Letter

Welcome to the XXXXX team! As engineers, we are looking forward to both learning about and contributing to medical innovation throughout this project. In this letter we will introduce ourselves, briefly describe our experience and backgrounds, set up basic rules for the team, designate a meeting plan for this quarter, and other guidelines. Since we are all eager to pursue this project for the whole year, we hope that this letter will be a useful reference and the start of a successful project.

Unmet need

At this point in the design process, our understanding is that during surgery, a patient's body may experience excessive pressure due to unnatural positioning, and without alleviation of the pressure, patients may experience complications such as injury. Additional cost to other stakeholders is also a concern. We understand that these risks are preventable but there is no commonly applied solution. There is a need for a pressure-relieving positioning aid that ensures anesthetized patients are not subjected to prolonged excessive pressures while in surgery. During this quarter, the first goal of our design process will be to identify the unmet need in sufficient detail to begin working towards an effective solution.

Who we are

We are all from different cultures and backgrounds, but currently we are all students studying mechanical engineering (ME) or bioengineering (BioE). Each member of our team will contribute their own strengths to a strong group foundation, and we intend on learning from each other as well. Our basic information is shown in the following table.

Name	Contact	Background	Strengths	EIH interests
		Undergraduate ME Sr	-Familiar with a team-based design process, i.e. taking a project from an idea to reality -Machine shop certified -Experience with rapid prototyping and engineering design software	-Learn how to use engineering in medical fields that will lead to human interaction -Expand knowledge of biology for future possibilities

		Undergraduate BioE Sr	<ul style="list-style-type: none"> -Solid biology background -Experience working in groups on tight deadlines in research lab 	<ul style="list-style-type: none"> -Work on solving a medical issue outside of the context of the BioE program -Interact with students from different backgrounds/programs
		Undergraduate ME Sr	<ul style="list-style-type: none"> -Machine shop certified - Worked on designs with regulations (from the FAA) -Wrote and submitted an application for a patent -Spanish speaker 	<ul style="list-style-type: none"> -Experience the process from project development to final product -Build biomechanical knowledge for career opportunities at Boeing or Nike
		Master's student in ME	<ul style="list-style-type: none"> -Being self motivated and positive to the tasks -Skills in building 3D model by Solidworks 	<ul style="list-style-type: none"> -Learning how to collaborate with others to deal with complex problem -Applying theoretical engineering knowledge into practice -Interacting with my teammates, clinician partner and stakeholders; try to make friends with them

Team Agreement

In order to work effectively and efficiently we have outlined some basic tenants we have all agreed to follow. Throughout this project we will adhere to the following:

1. Attend meetings at agreed times
2. Meet all deadlines
3. Have a positive attitude
4. Do not ignore group communication
5. Be honest and willing to ask for help
6. Do not assume someone else is doing the work, communicate, take initiative!

Communication

For communication between students, we will be in regular contact both digitally and in person. Students will meet together during the reserved class time and as often outside of class as necessary. Tentatively, students have determined entire groups' availability to be Monday, Wednesday and Friday from 3:30 to 5 pm, and will firmly schedule weekly meetings in the MolEs building. For organization, students will keep all the files (assignments, meeting records, relevant papers, etc.) in a single centralized location (Google drive). Email will be our primary method for communicating with our clinical partner unless another method proves more convenient, and ideally students will meet in person at least once week with XXX (because time and day depends on Dr. XXX's schedule, this meeting time is not yet arranged).

Contingency plan

We understand that there may be unforeseen circumstances that would require us to deviate from our above plans. We agree that we will all try our best to be present and prepared, and our scheduling will be flexible in order to accommodate individual contingencies and our need to meet. We expect that all team members will complete their portions of the project regardless of whole team availability, and that a single team member's temporary unavailability will not restrict our progress. If progress is restricted because of absences or regular distraction, this will be noted on peer evaluations. Distractions during meetings will be minimized by using electronic technology as research and communication tools only. We will discuss and set meeting goals before initiating the meetings. This will help us, the students, stay on track towards goal completion. Work on each assignment will be collaborative, unless the students determine that the participation of all members is not necessary. In such cases, the work will be distributed on a volunteering basis (to exploit everyone's strengths) or by negotiation. The students will attempt

to distribute the total work evenly among members. As of Autumn 2018, all of us plan on taking the EIH course all year long.

Team goals

Our primary goals are to develop a better understanding of this project's unmet need and the engineering design process in the context of medical innovation. For this quarter in particular, we will familiarize ourselves with the project and begin to formulate and design potential solutions to this need. Because we all plan on continuing with EIH through winter and spring quarters, it will be important that our design ideas have high potential for success, and we will need to have a concrete plan for further development.

Deliverables for this quarter:

- Definition of need found: beginning of quarter
- Benchmark Research: beginning of quarter
- Market Analysis: beginning of quarter
- Stakeholder Analysis: beginning of quarter
- In-person observations report: mid/beginning of quarter
- Brainstorm potential solutions: mid quarter
- Best solution pitch: end of quarter

Final remarks

As a team, we are looking forward to working with a clinical partner in order to learn about and contribute to resolving a medical challenge, and we are excited to take part in a project that will eventually become a product.

Sincerely,

October 9, 2018

