

PROJECT FINAL REPORT & PRESENTATION

Summer Clinical Immersion Program

Objective of Assignment

This report and presentation will give you a chance to deepen your knowledge in the area of the capstone design project(s) that you choose. This assignment will get you into the literature, patents, and further clinical immersion where you can see for yourself the results of your future biomedical innovations. Each report will serve as a springboard for future capstone design project activities during the academic year.

Overview of Assignment

Perform additional clinical shadowing and project needs assessment. Survey the literature and patents on your specific project(s). Describe the current state-of-the-art and suggest areas that require further development. Then briefly describe plans of how you would investigate and carry out your specific project(s).

Project Assignments

List all potential projects you have identified on the Google Doc spreadsheet here:

<https://docs.google.com/spreadsheet/ccc?key=0ApYzmXteHPz5dFF6RkFxdkRrbWpDZmNzWnZLR25zY3c&usp=sharing>

In addition, by placing your name next to particular projects in the “Interested in” column, select which ones you would like to investigate further, use in your written report(s), and present to the BME 455 class stakeholders and students.

Your list of identified projects and selections are due on Friday, August 2nd.

Dr. Jeff Reinbolt will make the final selection of project assignments and notify you on Monday, August 5th.

Project Report(s)

Reports are due on Wednesday, August 21st. A separate report is necessary for each project you are assigned. Format of the report is described below.

Format of the Report

The paper (*excluding references and figures*) ***should not exceed 3, double-spaced pages***. The paper is short, and needs to be extremely well written. A first draft should be written well in advance of the due date so that you have a chance to refine the final product. The paper should be written in the following form.

1. TITLE PAGE

Include the project title, date, stakeholder point of contact (name, title, email, phone), stakeholder location (affiliation, address), and your name

2. ABSTRACT (about 150 words)

This is the most important section of any report and should summarize the key points of your paper.

3. INTRODUCTION & BACKGROUND (~1 page)
Briefly describe what you will be presenting and why it is important. Relate the anatomical, biological, clinical, or business framework of your topic.
4. PREVIOUS WORK (~1 page)
Present a review of previous work on this topic. Do not simply review a number of individual papers, but try to synthesize what has been done. This section should be in a form such that the current state-of-the-art is easily appreciated. State the shortcomings in our current knowledge, and in a final paragraph state your project area that requires further development.
5. PROPOSED PROJECT (~1 page)
State concisely and specifically your particular problem that you propose to address in the project. Be sure to cover the project's functions and requirements that must be met with the final biomedical innovation. In broad terms, describe how you will investigate this problem. Point out the difficulties that you may expect to encounter in this design project. State what you believe will be the significance of your proposed project. Provide a realistic timetable for the completion of the work.
6. REFERENCES
Your paper should be referenced using primarily journal articles and patents. References and reference citations should conform to an acceptable style of a journal you may be referencing. The following sources may be useful:

<i>Index Medicus</i>	<i>J. of Orthopaedic Research</i>	<i>IEEE Trans. on Biomedical Eng.</i>
<i>PubMed</i>	<i>Science Citation Index</i>	<i>Clinical Orthopaedics and Related Research</i>
<i>Google Scholar</i>	<i>Medical Eng. & Physics</i>	<i>J. of Bone and Joint Surgery</i>
<i>J. of Physiology</i>	<i>J. of Biomechanical Eng</i>	<i>J. of Biomedical Material Research</i>
<i>J. of Biomechanics</i>	<i>Biological Cybernetics</i> and many others

Project Oral Presentation

This assignment is intended to let other students know about your project(s) and give you the opportunity to articulate your experiences and ideas to a group. The due date will be determined based on audience availability, but will take place near the start of the Fall semester.

Format of the Oral Presentation

Each student will give an informal, 15-minute, oral presentation on their project(s). The presentation should state the project(s) you have investigated and what you have found. The intention is to let the audience know about your topic, enlighten us with your findings, and persuade design teams to select the project(s). Feel free to be creative.