

Graduate Student Capstone Term Project

Spring 2024

Due Thursday, 4/25/2024 in class

**NO LATE ASSIGNMENTS WILL BE ACCEPTED!
You must work only singly.**

As required by Ohio University, graduate students must complete extra work in a dual-listed course such as ME 4670 / ME 5670. A semester-long problem-based learning (PBL) assignment must be completed by each graduate student independently. You must define your own project and have it approved by Dr. Bob by Thursday of the third week. I give no guidelines regarding the project – this is intentional to allow diversity in projects. However, it should include some type of computer simulation.

Example: choose one typical human motion from sports, work, or other activity (e.g. rehabilitation, or your hobby) and completely describe the associated anatomy and physiology. Then simulate the motion's kinematics, statics, and dynamics on the computer (MATLAB is a good tool; also OpenSIM) – you cannot choose the biceps/triceps arm motion example from the notes.

The goal of the project is have you investigate a biomechanics of human motion area of interest to your research, and help you explore it in depth before your MS thesis. A side goal of this project is for you to teach Dr. Bob and the undergraduates, and to get the undergrads excited about grad school. This intense effort is worth almost 25% of your grade (90 pts). Undergraduate students do not need to complete this project. Graduate students must work all semester and keep Dr. Bob regularly apprised of your progress!

Specific steps to complete:

1. Define your project via a one-page memo and APPROVE IT WITH DR.BOB BEFORE class on **Thursday 2/8/2024**. (Your Project Grade is 0 if your name is not on my paper by this deadline.) Include detail including project idea, goals, specific work steps, computer simulation plans, and specific deliverables.
2. Keep Dr. Bob apprised of your progress weekly just before or after class: this is your responsibility.
3. Present your interim project results orally to the class on **Thursday 3/7/2024**. Also, submit your interim written report on this day. **If you skip this step (or submit late) your maximum grade for the project will be 70%.**
4. Present your project results orally to the class on **Thursday 4/25/2024** in class. This must be a professional presentation. The final written report must also be submitted in class on this day. **If you skip this final presentation your final project grade is 0%.**

Any questions, just ask!**Pace yourself to work every week. Report regularly to Dr. Bob.****Do not ask for an extension or an incomplete.**