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Course Description

This course introduces the history of prosthetic devices, investigates current innovations/research in the growing field, and promotes discussion regarding the ethics of prosthetic devices. Guest lecturers will be featured throughout the semester to bring a real-world perspective to the material discussed. This class will involve group design activities and discussion centered around improving current prosthetic technology while fostering an environment for the sharing of new ideas. Additionally, it provides the opportunity to work with BME and UVA Hospital Faculty to learn about the grant application process for prosthetic innovations. Students will be able to get a headstart in the research and design process by completing a grant application, with the option to apply for project funding.

This course will be held via Zoom every Monday from 5:00-5:50pm.

Course Objectives

- Build a foundation regarding the past, present, and future field of prosthetics
- Gain insight into the field from guest speakers and current research
- Challenge students to think like an engineer and learn/use the design process
- Design a prosthetics-related project and create a grant application
- Potentially submit the grant application to the University (Experiential Learning Fund and/or BME Clinical Scholars Fund)

Assignments

This class will be graded using a points system, and there will be a total of 200 points available to you. The breakdown is as follows:

Attendance: (10 points) Each week we will take attendance to keep track of who is in class. Since we only meet once a week, we want to make sure you are all getting the most out of our class and participating in class activities. Your attendance is mandatory (meaning it will count towards your grade) for 10 of our 13 total classes. If you miss more than three classes, it will start to impact your grade. The only class we specifically ask that you cannot miss is May 3rd, which will be the day of our final presentations. We understand that things pop-up! We ask that if you will not be in class, please send us a courtesy email to let us know. Failure to email us prior to the start of class will result in the loss of an attendance point regardless. We will be recording all of our lectures and posting them to the Collab site if you do have to miss.

Blog Posts: (20 points) In hopes of you all engaging with the current state of the field of prosthetics throughout the semester, we ask that you complete two blog posts (on the Collab site) at any point during the semester. Each blog post will be worth eight points. The remaining four points will be awarded for commenting on others' posts (can be just 1-2 sentences). For the blog post to receive full credit, we have two requirements:

- Find a current article/video (published in the past calendar year) about a cool prosthetic innovation you wish to share with the class and share the link in your post
- Write ~250 words summarizing the article and sharing your thoughts on the ethics of it

Weekly Quizzes: (100 points) Each week there will be a quiz due before class begins. These will be sent out via email after class the week prior and will be administered using Google Forms. They will either be focused on the material we discussed the week prior, or they will be an open ended style checkpoint looking for your feedback on the class. The quizzes are all open book/notes, and the main purpose of them is to make sure you are engaged with the material and are enjoying the class. The quizzes will be worth ten points each, and there will be a total of ten quizzes throughout the semester.

Final Project/Presentation: (70 points) Students will be required to submit a project proposal pertaining to one of the subject areas discussed during the semester to the co-instructors. We will provide a more detailed rubric when we introduce the project.

In order to pass this course, students must achieve a 70% or higher (140/200 points).

Instructors

Maddie Corona ~ BME '23

mjc3zj@virginia.edu

Emma Lehmann ~ BME '23

ell2umz@virginia.edu

Faculty Advisor

Professor William F. Guilford

guilford@virginia.edu

Students with Disabilities or Learning Needs

It is our goal to create a learning experience that is as accessible as possible. If you anticipate any issues related to the format, materials, or requirements of this course, please reach out to us so we can explore potential options. Students with disabilities may also wish to work with the Student Disability Access Center to discuss a range of options to removing barriers in this course, including official accommodations. Please visit their website for information on this process and to apply for services online: sdac.studenthealth.virginia.edu. If you have already been approved for accommodations through SDAC, please send us your accommodation letter and email us so we can develop an implementation plan together.

Discrimination and Power-Based Violence

The University of Virginia is dedicated to providing a safe and equitable learning environment for all students. To that end, it is vital that you know two values that I and the University hold as critically important:

1. Power-based personal violence will not be tolerated.
2. Everyone has a responsibility to do their part to maintain a safe community on Grounds.

If you or someone you know has been affected by power-based personal violence, more information can be found on the UVA Sexual Violence website that describes reporting options and resources available - www.virginia.edu/sexualviolence.

As your professors and as a person, know that we care about you and your well-being and stand ready to provide support and resources as I can. As a faculty member, we are responsible employees, which means that we are required by University policy and federal law to report what you tell us to the University's Title IX Coordinator. The Title IX Coordinator's job is to ensure that the reporting student receives the resources and support that they need, while also reviewing the information presented to determine whether further action is necessary to ensure survivor safety and the safety of the University community. If you wish to report something that you have seen, you can do so at the **Just Report It** portal (<http://justreportit.virginia.edu/>). **The worst possible situation would be for you or your friend to remain silent when there are so many here willing and able to help.**

Religious Accommodations

It is the University's long-standing policy and practice to reasonably accommodate students so that they do not experience an adverse academic consequence when sincerely held religious beliefs or observances conflict with academic requirements.

Students who wish to request academic accommodation for a religious observance should submit their request in writing directly to me as far in advance as possible. Students who have questions or concerns about academic accommodations for religious observance or religious beliefs may contact the University's Office for Equal Opportunity and Civil Rights (EOCR) at UVAEOCR@virginia.edu or 434-924-3200.

Recording of Classroom Activities

We will be recording every lecture in order to accommodate students who will be learning remotely. Because lectures include fellow students, you and they may be personally identifiable on the recordings. These recordings may only be used for the purpose of individual or group study with other students enrolled in this class during. You may not distribute them in whole or in part through any other platform or to any persons outside of this class, nor may you make your own recordings of this class. If you want additional details on this, please see Provost Policy 008 which is expected to be updated for the Spring 2021 semester. If you notice that we have failed to activate the recording feature, please remind us!