PHYS 322 Project Proposal instructions and grading rubric

You will write a project proposal that introduces your topic, identifies a question you will investigate, and explains your planned approach. You will receive feedback on this proposal, which you are encouraged to incorporate into the planning of your poster.

Specific requirements:

Title page (1 point):

- The title of the project should be interesting, brief, and clearly identify the subject of the work
- List names of authors (i.e. everyone in your group)
- Include class and quarter: PHYS 322, Winter 2024

Introduction (10 points)

- Write at least two paragraphs of background about the topic of your project. A good rule of thumb is to start with a broad introduction to the system, and then "zoom in" to more specific information about the question you will address. This part of the proposal should orient the reader to research that other people have done on the subject and lay the groundwork for the question you will address (next paragraph).
- Write a paragraph that describes the question you will address and motivates the significance of this question. If you will be testing a specific hypothesis, describe this here.

Model (10 points)

- Include a schematic that illustrates the essential features of the biophysical model on which you will base your simulations. This can be a hand drawn sketch or an image created in a computer program like Adobe Illustrator. The important thing is that it helps the reader to visualize the physical assumptions of your model.
- Describe the features of your model in words. Explain essential interactions and processes included. Describe simplifying assumptions you made and the reasoning behind these assumptions.
- Mathematics of the model: Show the fundamental equations that govern the dynamics of your model system.
- Computational methods: Provide a brief verbal description of the computational approach you will use to simulate the model you have described.
- Note: The conceptual features of your model, the corresponding mathematical underpinnings, and the computational approach may still be a work in progress at this point. The goal for this section of the research proposal is to articulate your initial plans as clearly as possible.

References (4 points)

- Include at least two authoritative sources of information about your topic, using appropriate in-text citations in APA format. See the resources on Canvas for identifying authoritative sources and preparing citations.

Format and style (5 points)

- Clearly written, easy to follow, all required sections are present
- Correct grammar, spelling and punctuation
- Voice: First person voice or third person voice are both acceptable, as long as one is used consistently throughout the report.
- Audience: Consider your audience to be peers with a similar educational background. Do not assume that they have a specialized knowledge of the system you studied.
- Word document uploaded to Canvas

Total points possible: 30

Grading:

For each category, a grade will be assigned according to: (Possible points)*multiplier, with the multipliers:

Meets or exceeds all expectations: 5/5
Meets most expectations with some exceptions: 4/5
Meets some expectations, with significant omissions: 3/5
Meets few of the expectations: 1/5 or 2/5

For example, if your Introduction section meets most requirements, with some exceptions, your score for this category would be: (Possible points)*multiplier = (10 points)*(4/5) = 8 points