

Exercise Physiology Grant Proposal Guidelines **There are MANY due dates for this!**

Goal: Develop a grant to research an understudied topic in exercise physiology. Why? Because at some point in your life you are going to have to write a grant or pitch an idea to someone. Most people do not get this experience in their undergraduate career. Furthermore, there are tons of research avenues in exercise physiology!

Small note of advice on grants. The most basic structure is: tell the reader what you are going to tell them, then tell them that thing, and then end by telling them what you just told them. You set up what we know, identify something we don't know (the gap in knowledge), then proposal how you are going to fill that gap in knowledge.

Format: A formal written grant – all the details and guidelines are below.

Teamwork Statement: You MUST work in a group of 5-6 people for this project because grants are almost always collaborative. Each group member will be required to fill out a group work assessment so that I can be sure everyone is pulling their weight. Yes, I was that kid in college who did all the work...

Project Timeline

January 25: [Group composition, group name, research topic due](#) – only one group member needs to turn in

February 8: Grant proposal draft due for peer review – just the project summary and proposal are needed for this – not the other components. Turned in by uploading to this [Google Folder](#) – only one group member needs to turn this in.

February 15: [Peer reviews](#) due and returned to groups (Ocobock will assign the peer reviews, share documents, and return reviews) by February 17.

February 24: Grant class presentations

March 3: Formal written grant turned in by uploading to this Google Folder. Only one group member needs to turn this in. ALL members need to turn in the [self-reflection](#).

Grant Components...and subcomponents

There are many elements to a grant proposal. Below is each required component of your grant proposal. After this, I provide some resources for you as well as a timeline.

1. Title Page

a. Components:

- i. Title of Project
- ii. Group Name
- iii. Group Members

2. Project Summary

- a. Description:* this is like the abstract to your grant proposal – it sums up the most important intellectual components of the project...what you are going to do...what question are you asking and hoping to answer, what you are doing it, and why you are the ones who should be doing it.

- b. *Components:*
 - i. Title of Project
 - ii. Group Name
 - iii. Summary of Project: see description above should be about 2 paragraphs.
 - iv. Intellectual Merit: how this project contributes to exercise physiology knowledge – what is its significance? Should be 1 short paragraph
 - v. Broader Impacts: what impact this research will have on the people you are working with, the field of exercise physiology, and the public. Should be 1 short paragraph.

c. *Page Limit:* 1 page

3. Project Proposal

- a. *Description:* this is the meat of the project. This is where you lay out what this project is, your research, what you are going to do, and why it is worth doing. It has many components, so please pay attention to that below.
- b. *Components:*
 - i. Introduction: in this section you set up the project/problem. This section should answer the following questions:
 1. What is it you are going to do/what question are you asking and hoping to answer?
 2. Why is this worth doing...what is its significance?
 3. What are your hypotheses?
 - ii. Literature Review: this section reviews what is currently known about the topic you are proposing to research. So, if you want to look at muscle fatigue during powerlifting training, you will want to focus your literature review on what is already known about muscle fatigue and highlighting what we still don't know about muscle fatigue – which is highlighting why the work you are proposing is important and significant!
 1. This needs to consist of research articles that are peer reviewed. Guidelines are below.
 - iii. Materials and Methods:
 1. This sets up your plan of action.
 2. Who are you working with? This means who will be the participants in your study and why this group of people?
 3. What experiments or other methods are you using to test your hypotheses and answer your questions? What data are you collecting and how?
 - a. This should lay out the techniques and equipment used.
 4. You should explicitly say how you are testing your hypotheses with these methods. Often, organizing the methods on how your hypotheses are being tested can be helpful (see Ocobock's Career grant for this).

5. You can use peer reviewed articles here for methodology as well. Such as, “We will measure resting metabolic rates using indirect calorimetry follow the standard procedure outlines in Ocobock et al. (2020).”
- iv. Timeline:
 1. Lay out the timeline for this research project. Can this be done in 2 years? 3? 5? Two, three, and five years are the most common grant durations for non-clinical trials. Clinical trials can take like a decade.
 2. This can be done with a chart or table or timeline graphic
- v. Intellectual Merit: how this project contributes to exercise physiology knowledge – what is its significance? This is the expanded version of what you wrote in the project summary.
- vi. Broader Impacts: what impact will this research have on the people you are working with, the field of exercise physiology, and the public.
 1. Things to consider:
 - a. How will study participants directly benefit?
 - b. How will the field of exercise physiology benefit?
 - c. How will the public benefit?
 - d. How will you share your results and with whom?
 - e. What sort of outreach will you do to promote the results of this work and benefit the community?
 - c. *Page Limit*: 10 pages, no larger than 12pt and no more than double spaced and 1inch margins. Shockingly, these days I find 10 pages far too few and I used single space and Arial font size 12 because it is smaller than Times New Roman.

4. Literature Cited

- a. *Description*: this is all the literature you cite throughout your grant proposal.
- b. *Requirements*: You should have at least 20 peer reviewed sources. I do not care what citation style you use in your proposal or for your literature cited document. I do recommend APA 6th ed. though.
- c. *Page Limit*: none

5. Budget

- a. *Description*: this is the big wish list of all the things you want and need to carry out the research project.
- b. *Things you may include (this list is not exhaustive)*:
 - i. Reimbursement for study participants
 - ii. Salary for research team members
 - iii. Equipment costs
 1. This includes fancy research equipment but also little things like pipette tips, latex gloves, band aids, etc.
 - iv. Lab analysis costs – if you are measuring hormones and don’t want to do it yourself, you can ship it to a lab to have them analyze samples – but that costs money too

- v. Travel
 - vi. Food and housing if traveling
 - c. *Page Limit*: none, most easily done either as a table in Word or in an Excel sheet
- 6. Budget Justification**
- a. *Description*: This is where you explain why you need what you need (equipment, travel, etc) and why you need it in that quantity
 - b. *Requirements*: Each of your budget items need to appear in this document with the why you need them.
 - c. *Page Limit*: 2
- 7. Biographies**
- a. *Description*: this is where you tell the grant committee about yourself and why you are the one to be doing this study.
 - b. *Requirements*: attempt to answer the following questions:
 - i. What strengths and experience do you bring to this research team?
 - ii. Why/how are you qualified to conduct this research?
 - iii. How will receiving the grant contribute to your career goals?
 - c. *Page Limit*: no more than 300 words **per team member** – as some teams may be larger than others, I will not impose a page limit.
- 8. Grant Proposal Presentation** – your team will have no more than 7 minutes to present your proposed research to the class. You will want to follow the basic structure of the Project Summary as your guide for this. I do expect you to have a set of slides for this.

Resources

1. [How to determine if your source is peer reviewed](#)
 - a. Best databases to use:
 - i. Google Scholar – does link up with ND library
 - ii. PubMed – accessible via library website
 - iii. Web of Knowledge – accessible via library website
 - iv. Web of Science – accessible via library website
2. How to write a grant – many guides
 - a. [From UNC-Chapel Hill](#)
 - b. [From Wisconsin](#)
 - c. [From Purdue](#)
 - d. [From Northwestern](#)
3. Example Grants – see the examples I put up on Canvas of my own grants and my graduate student's grant! Please don't share, also these are obviously heavy hitting. I do not expect you to have this level of quality, detail, or any pilot data. However, the structure will be helpful for you to see.
4. Dr. Ocobock – contact me with questions!

Due Date Checklist

To Turn In	Due Date
Group composition, group name, research topic – via Google Forms – only one group member needs to turn this in	1/25/2022
Project Summary and Proposal Draft for Peer Review – uploaded to this Google Folder – only one group member needs to turn this in	2/8/2022
Peer Reviews – fill out Google Forms	2/15/2022
Grant Proposal Presentation in Class	2/24/2022
Full Grant Submission with all components (see checklist on next page) – uploaded to this Google Folder – only one group member needs to turn in	3/3/2022
Self-Reflection and Group Evaluation – fill out Google Form – EVERYONE does this	3/3/2022

Project Check List

Main Component	Sub-components	Page Limit	Done
Title Page		1	
	Project Title		
	Group Name		
	Group Members		
Project Summary		1	
	Project Title		
	Group Name		
	Summary of Project		
	Intellectual Merit		
	Broader Impacts		
Project Proposal		10	
	Project Title		
	Group Name		
	Introduction		
	Literature Review		
	Materials and Methods		
	Intellectual Merit		
	Broader Impacts		
	Timeline		
Literature Review	At least 20 peer reviewed sources	None	
Budget		None	
Budget Justifications		2	
Biographies	1 for each team member	300 words per team member	
Grant Proposal Presentation		7 minutes	
Peer Review		Google Form	
Self-Reflection		Google Form	

