UF | College of Health & Human Performance

Department of Applied Physiology and Kinesiology

UNIVERSITY *of* FLORIDA

GRADUATE RESEARCH METHODS

HLP 6535 -- 3 -- SPRING 2021

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Preferred pronouns: she/her/hers

OFFICE HOURS: Fridays Period 7 (1:55-2:45 PM EST). Virtual; details posted on Canvas. Virtual; details posted on Canvas.

MEETING TIME/LOCATION: This is a fully online course, so there are no in-person meetings. Lectures are pre-recorded so that you may watch them at your convenience; please refer to the "Course Schedule" below for the suggested timeline to follow. There are multiple sections for this course:

Class #30998 | Section 1102 | Online

Class #30999 | Section 102A | Online

If you are enrolled in APK 6900 (Graduate Independent Study) and have a prior approval for completing HLP 6535 as your responsibilities for that course, you are responsible for all content in this course, as outlined in this syllabus.

COURSE DESCRIPTION: The course is designed to provide an introduction to basic research methodology and design, which includes statistical analysis techniques used in applied physiology and kinesiology. Students will demonstrate their knowledge of the course materials by analyzing, interpreting, and summarizing research writing in professional journals and by planning a research study.

PREREQUISITE KNOWLEDGE AND SKILLS: Undergraduate degree. Some background in math and science. Introductory statistics is not required but is helpful. Students enrolling in this course must have at least the following minimum technical skills to succeed:

- Using the learning management system, Canvas
- Using e-mail with attachments
- Microsoft Office: Word, PowerPoint
- Using Zoom video conferencing
- Downloading and installing software such as Google Chrome with extension for HonorLock
- Problem solving any download issues for our statistical software, SAS JMP (directions provided in Canvas)
- Incorporating applications associated with Canvas, such as Flipgrid and VoiceThread

MATERIALS: No formal textbook is required for this class. Any readings will be provided to you through Canvas. Additionally, you will have access (via internet) to John H. McDonald's "Handbook of Biological Statistics" (3rd edition) and several reports on topics such as bioethical issues in biomedical sciences. Access to the internet, a computer with functioning webcam, microphone, and speaker (or headphones/earbuds) are required. Please refer to "UF Computing Requirements" below for additional information on this. All additional material will be provided online through Canvas.

COURSE FORMAT: This class is 100% online. Pre-recorded lectures and assigned readings are organized within modules. The class is designed to be flexible to your schedule. Assignments are due throughout the semester, with at least a work week to complete each. There are four midterm examinations and one "research project". The research project will focus on a research problem you are interested in. This research project will comprise a research plan you will work to develop throughout the semester. This is a scaffolded assignment, meaning the larger project is broken into smaller assignments that focus on skills or types of knowledge required to successfully complete the larger assignment. It will cumulate in a poster presentation (which includes a 3-5 minute recording).

COURSE LEARNING OBJECTIVES: Upon completion of this course, students will be able to:
1. Discuss issues related to research ethics, responsible conduct of human and animal research, and data collection, as well as recognize how to avoid plagiarism.
2. Utilize effective techniques for conducting a literature search using online databases and managing references.
3. Critique research articles and determine the quality of publications, identifying issues related to methodology and guidelines to improve scientific rigor and reproducibility.
4. Identify and apply the steps involved in the scientific method by formulating a research question, building effective scientific aims, generating a research

hypothesis, and designing an experimental plan (study) to address the question.
5. Generate and store data in an effective format and then select and perform appropriate statistical calculations to analyze data.
6. Interpret visual representations of data (i.e. tables, graphs).
7. Utilize scientific principles and inductive reasoning to translate and interpret results.
8. Present aspects of the scientific method, including experimental design and results, in an accurate and professional manner.
9. Outline the processes related to manuscript reviews, writing, authorship, and journal impact factors.
10. Demonstrate a clearer understanding of possible careers and how acquired skills and interests match up to a given career path.

COURSE AND UNIVERSITY POLICIES:

UF STUDENT COMPUTING REQUIREMENTS: Since this course is fully online, and per the UF student computing requirements, UF does not recommend students relying on/regularly using tablet devices, mobile phones, or Chromebook devices as their primary computer, as these may not be compatible with specific platforms used in this course or other UF courses (https://it.ufl.edu/policies/student-computing-requirements/). Access to a fast, secure internet network will be necessary for this course. If a student is in an area with limited internet access, UF students can access eduroam for free with their GatorLink log-in credentials. If you have any problems connecting to eduroam, you can contact the UF Computing Help Desk.

There are more than 100 Wi-Fi hotspots in Florida, including several state university campuses and community colleges. You may connect to eduroam in other states as well. You don't have to sit in a car: many locations have open spaces and communal rooms available so you can get online while socially distancing and following CDC guidelines in an air-conditioned space. In Florida, all UF/IFAS Research and Education Centers (REC) are equipped with eduroam, so if you live in a rural area of your county, you can visit an REC to securely watch course videos and take care of your academic needs.

If you have any problems connecting to eduroam you can call (352-392-HELP/4357) or email the UF Computing Help Desk.

ATTENDANCE POLICY: As an asynchronous online course, there is no specific attendance policy. However, midterm exams must be completed within the designated assessment time and assignments must be submitted by posted deadlines.

PERSONAL CONDUCT POLICY: Students are expected to exhibit behaviors that reflect highly upon themselves and our University:

- Read and refer to the syllabus.
- Arrive to live sessions on time.
- Follow the guidelines for appropriate behavior in virtual environments (i.e. name visible, non-offensive background (whether virtual or not), appropriate dress during live sessions).
- Submit assignments by the deadlines. If you miss a deadline, please recognize that requesting an exception is unfair to your classmates and instructor.
- Show respect for the course instructor and classmates by not holding personal conversations during class time (especially during peer presentations).
- Use professional, courteous standards for any web exchanges (i.e. proper greetings and titles in emails).
- UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions.
- You are obliged to report any condition that facilitates academic misconduct to appropriate personnel.

The use of software to promote academic integrity through plagiarism detection is advocated for. Although not required, Turnitin is an excellent resource for this and reference/citation assistance.

MAKE-UP POLICY: Make-up assessments and assignments will be given at the discretion of the instructor; unexcused but approved late submissions will be subject to grade point penalty (i.e. 50% deduction). To request and possibly schedule a make-up quiz or exam, please e-mail me and provide relevant information, including documentation. Unexcused missed assessments and assignments will result in a zero on that item. Ideally, make-ups should be completed before the next assignment deadline.

Please do **not** ask for an accommodation for inappropriate excuses, which include:
- Extracurricular activities
- Out of town/vacation
- Sleeping in
- Sports
- Technological issue due to procrastinated assignment upload
- Volunteering
- Work

If you have a serious emergency or life event, please contact the Dean of Students Office (www.dso.ufl.edu) and they will contact your instructor so that you do not have to provide documentation to individual instructors for a make-up. The requirements for make-ups in this course are consistent with university policies that can be found in the online catalog at: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/.

HONORLOCK SYSTEM REQUIREMENTS (QUIZ AND EXAM PROCTORING): Exams will be proctored using HonorLock. You will not need to sign-up or schedule a testing time, nor will you need to create an account. To ensure your device is compliant with HonorLock, a series of pre-assessment checks must be performed before gaining access to the exam. Please do so in advance of the exam; we are unable to further accommodate for individual technological issues that may detract from your exam time. Specifications necessary for HonorLock to work are listed below:

- **System compatibility and setup:**
    - HonorLock is only supported through *Google Chrome web browser* on Mac, PC (no other mobile devices or tables are supported)
    - Students must install the *HonorLock Extension* within Chrome
    - HonorLock will not support Windows 8, Windows 8.1, Mac OSX 10.11 and Mac OSX 10.12. You can find the updated *Minimum System Requirements* and a system compatibility test at www.honorlock.com/support.

- **Additional considerations using HonorLock for exams:**
    - You will need to take the exam on a desktop computer or laptop with a webcam and microphone set up on your chosen device. This will not work on mobile devices or tablets, including iPads and smart phones.
    - You need to make sure that the **camera is facing YOU at all times** – if the camera does not stay facing you or if you are out of frame, the exam will pause, preventing you from continuing, even midway through. This will detract from your exam time.
    - You need to open Canvas on the **Google Chrome internet browser** and to download the *HonorLock Chrome Extension*. Other internet browsers will **not** be compatible with HonorLock.
    - Make sure you have a stable Internet connection wherever you are taking the exam (i.e. good Wi-Fi).
    - A 360-degree scan of your testing room/environment will be required. If you are using a laptop, you will need to pick up your laptop and rotate it for the room scan, including your examination surface (i.e. desk, table), floor space, your lap, etc. The testing environment should be cleared of any clutter, no notes, or textbooks laying out. These could constitute a violation of the Honor Code (i.e. academic dishonesty).

- o Make sure the room you are taking the exam in is well-lit and that you are by yourself. Rooms that are not bright enough may get flagged as "blurry" or "unclear". Avoid posters or photographs on the wall behind you; try to minimize noise (i.e. talking aloud). These will also flag your exam, which will be reviewed by a member of the instructor team for the course to confirm or refute any academic dishonesty.
- o You must have a valid and clear photo identification (ID) card (Gator ID, driver's license, passport) to show at the start of the exam. Make sure the image is clear.
- o Only one screen (I.e. cannot have multiple monitors) and one tab (i.e. the tab that is being used for the exam) in Chrome is allowed. HonorLock has an integrity algorithm that can detect search-engine use, so do not attempt to search for answers, even if it is on a secondary device.
- o An HonorLock Practice Quiz will be set up under Quizzes in Canvas. **Please go through this practice test well in-advance of taking the exam**. This practice quiz allows you to go through all the pre-assessment checks so you will know what to expect when taking the exam itself. Take the practice quiz on the device you intend to take the exam on, in the same environment (building, room, etc)**.**
- o **Failure to meet the items above may result in a 0 grade.** If you encounter any issues with the testing platform or the exam, you should immediately contact HonorLock for assistance. If this fails, you need to email your course instructor right away with specific details (i.e. screenshots of your chat conversation with HonorLock with time stamps) of what occurred so that they can assist you as quickly as possible.

INCLUSION, DIVERSITY, EQUITY, AND ACCESS (IDEA): All individuals, irrespective of their gender, gender identity, gender expression, sexual identity, sexual orientation, race, ethnicity, religious affiliation, physical or mental ability, political affiliation, or any other perceived generalized differentiator, are welcome in this course. It is expected that we treat each other with respect and as equals. Treat one another as you want to be treated so that we can have valuable discussions in this course. Intolerant, inflammatory, or insulting behavior or speech is not acceptable and may lead to dismissal from the course. Please do reach out for assistance regarding accommodations – I do not want inaccessibility to keep anyone from the opportunity to learn and grow.

ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (http://www.dso.ufl.edu/drc/). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking exams. Accommodations are not retroactive; therefore, students

should contact the office as soon as possible in the term for which they are seeking accommodations. Homework assignments and lab modules are intentionally accessible for at least 2-4 weeks prior to the due date to account for those who may need more time for completion.

Students registered with the DRC: It is strongly recommended that you submit <u>all</u> of your lecture exam requests through the DRC in the *first week of classes* to ensure that they are approved in time. Unless you've made special arrangements with the DRC, exams will be taken in Canvas similar to other students but with your specific accommodations (i.e. extended time, use of screen reader).

In the case of situations that may impede learning throughout the semester, students may reach out to the Dean of Students Office to provide documentation that will then be directed to the course instructor.

PREFERRED NAME: It is important to the learning environment that you feel welcome and safe in this class, and that you are comfortable participating in class discussions and communicating with me on any issues related to the class. I would like to acknowledge your preferred name, and pronouns that reflect your identity. Please let me know how you would like to be addressed in class, if your name and pronouns are not reflected by your name on the class roster.

You may also change your "Display Name" in Canvas. Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Please do keep your preferred name (first and last, if possible) visible when engaging in course activities online.

PRIVACY (FERPA): Aspects of course content may be audio and visually recorded for students in the class to refer back to. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows

students to type questions and comments live. By enrolling in this course, you will be required to have audio and video enabled for your group presentation. If you do not want your image in any recording pertaining to course content (i.e. presentations, demonstrations), please let me know within the first couple weeks of class so that we may seek an accommodation. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

COURSE EVALUATIONS: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/.

GETTING HELP:

Health and Wellness
- U Matter, We Care: If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575
- Counseling and Wellness Center: https://counseling.ufl.edu/, 352-392-1575
- Sexual Assault Recovery Services (SARS) - Student Health Care Center, 392-1161
- University Police Department, 392-1111 (or 9-1-1 for emergencies) http://www.police.ufl.edu/

Academic Resources
- E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml
- Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling. https://career.ufl.edu/
- Library Support: https://uflib.ufl.edu/find/ask/ Various ways to receive assistance with respect to using the libraries or finding resources.
- Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. http://teachingcenter.ufl.edu/
- Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. http://writing.ufl.edu/writing-studio/
- Student Complaints
  - On-Campus: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/
  - On-Line Students Complaints: http://distance.ufl.edu/student-complaint-process/

GRADING:

The following table outlines the point-accruing components of the course. All grades except the research design project will be uploaded to the gradebook prior to the last day of class.

Evaluation Components	Points Per Component
Assignments	Varies (expected up to 25 pts)
Midterm Exams	20 pts each (x4)
Quizzes	Varies (expected up to 25 pts)
Research Project:	
Proposal: Literature Review, Specific Aims	25 pts
Methodology	25 pts
Discussion: Translation, Application	25 pts
Poster Presentation	25 pts

Assignments – Assignments include discussion posts, peer evaluations, literature compilation and review, and reference management. "Participation" activities are included in this grading segment: for example, students will be asked to create a short Flipgrid post to introduce themselves to the class. This activity will require the use of audio and visual recording tools. To retain all participation points, students must upload their post and comment on that of a classmate within the first two weeks of class.

Midterm Exams – This course comprises four closed-book midterm exams comprising multiple choice, multiple answer, matching, fill-in-the-blank, and short answer questions on course content (on lectures, readings, and assignments). Students will have access to the exams for 48 hours, each, with unlimited time. However, each exam must be completed in one sitting. HonorLock will be used for proctoring of examinations.

Quizzes – Quizzes are primarily statistical-based problem solving. Assignments are accessible for the duration of a Module (of which there are 4). Content must be completed a couple days prior to the associated Midterm Exam. Students have two attempts per quiz; the highest grade earned will be retained.

Research Project – Each student will develop an independent research project. This project will be worked on throughout the semester with scaffolded assignments due throughout the term, separating by parts: (1) proposal, which comprises a literature review, specific aims, hypothesis, purpose; (2) methodology, which includes statistics (including sample size) and experimental protocol; (3) discussion, which comprises translation of findings and clinical application of research project. The final component of the research project is a (4) poster presentation, which will comprise creating a

poster and recording a short recording (audio and visual) via VoiceThread, which you will be oriented to via Canvas.

GRADING SCALE: Any discrepancies with points displayed in the gradebook must be brought to the attention of the instructor as soon as possible, or before the last day of class. There is **no** curve for this course and final grades will **not** be rounded up. Any requests for additional extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly. More detailed information regarding current UF grading policies can be found here: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/.

Letter Grade	Percent of Total Points Associated with Each Letter Grade	GPA Impact of Each Letter Grade
A+*	97.00-100%	4.0
A	93.00-96.99%	4.0
A-	90.00-92.99%	3.7
B+	87.00-89.99%	3.3
B	83.00-86.99%	3.0
B-	80.00-82.99%	2.7
C+	77.00-79.99%	2.3
C	73.00-76.99%	2.0
C-	70.00-72.99%	1.7
D+	67.00-69.99%	1.3
D	60.00-66.99%	1.0
E (F)	0-59.99%	0

*An A+ appears as an "A" in the final UF grade system

SUCCESS AND STUDY TIPS:

Recognizing that people learn in different ways and with no judgement on how they study (i.e. highlighting text, using YouTube, drawing figures), here are some tips for success and studying in this course that haven been proven useful for many:

- A lot of the material presented in this class is reasonably advanced. However, the course is designed so that if you do the assignments, work hard at your research project, and complete all the lectures, you will likely earn a good grade.
- The quizzes are open-book and multi-attempt, which you should take advantage of to earn high marks. The midterms are challenging, but their impact on your final grade can be minimized by the higher-valued research project components.
- Concentrate on the material and get as much as you can out of material to prepare yourself for a professional life rather than becoming anxious about a high grade. This is a skills-acquisition class; *not* a "weed out" class. Again, most students who do what is asked of them do very well.

- Look up material that inspires you. If you come across something that connects to class content, share as a Discussion on Canvas. We're lucky to have so many resources through the internet.
- Check Canvas for announcements! Adjustments to the schedule and edits/clarifications to topics discussed in class will be posted there.
- Things happen; that's life. If there are some majorly overwhelming things happening during your semester, send me an email and even schedule a virtual meeting with me. We'll work together to figure out what steps you should take in hopes of wrapping up the course well. Swing by and chat academia (i.e. grad school), sports, and aspirations to travel the world some time. ☺

COURSE SCHEDULE:

Specifics, such as content covered within each module, are available on Canvas. Changes to the schedule will be posted there, as well; please review all announcements for updates. All assignments and assessments are due or close at 11:59 PM EST on the date marked unless otherwise noted or mentioned in Canvas through announcements.

Module	Week	Date	Assignment Deadline or Examination Day
Orientation	1	Jan 11	Pre-Survey
1		Jan 13	
		Jan 15	
	2	Jan 18	
		Jan 20	
		Jan 22	
	3	Jan 25	
		Jan 27	
		Jan 29	
	4	Feb 1	
		Feb 3	Module 1 Assignments
		Feb 5	Midterm Exam 1 (access Thurday 11:59 PM EST-Saturday 11:59 PM EST)
2	5	Feb 8	Research Project: Proposal
		Feb 10	
		Feb 12	
	6	Feb 15	
		Feb 17	
		Feb 19	
	7	Feb 22	
		Feb 24	
		Feb 26	
	8	Mar 1	
		Mar 3	Module 2 Assignments
		Mar 5	Midterm Exam 2 (access Thursday 11:59 PM EST-Saturday 11:59 PM EST)
3	9	Mar 8	
		Mar 10	
		Mar 12	
	10	Mar 15	
		Mar 17	
		Mar 19	
	11	Mar 22	
		Mar 24	Module 3 Assignments
		Mar 26	Midterm Exam 3 (access Thursday 11:59 PM EST-Saturday 11:59 PM EST)
4	12	Mar 29	Research Project: Methodology
		Mar 31	
		Apr 2	
	13	Apr 5	
		Apr 7	
		Apr 9	Research Project: Discussion
	14	Apr 12	
		Apr 14	
		Apr 16	
	15	Apr 19	Module 4 Assignments
		Apr 21	Midterm Exam 4 (access Monday 11:59 PM EST-Wednesday 11:59 PM EST)
		Apr 23	
	16	26-Apr	Research Project: Presentation; Post-Survey

"Every student can learn, just not on the same day, or the same way." –George Evans