Course Description:

The study of human movement is a complex and ever evolving science. To appropriately understand how we move, why we move certain ways, and how we can move better, a research scientist must design and employ a diverse array of research methodologies. Unfortunately, there is no one “right” way to conduct a research study; instead, we must ensure that there is cohesion between what is being asked and what is being analyzed. To that end, it is essential that researchers have a foundational understanding of how to design a study from conception through analysis. Further, competency in research methods is more than a technical understanding of statistics and measurement; it requires the development skills so as to critically analyze questions, methods, uses of research data and inferences based on evidence. The foundations of useful kinesiology-based research, therefore, relies on a solid understanding of the connections among research questions, methods for gathering and analyzing evidence, inference from evidence, and links between inference and use. These connections will be the foci and driving force of this course.

Learning Objectives:

This course has two broad goals: (1) to build a foundation on which students can begin to develop an understanding of the methods used in kinesiology, health promotion, and recreation research; and (2) develop students’ basic competencies in specifying linkages among research questions, methods, evidence, inference, and use. To accomplish these goals, this course will:

1. Introduce the epistemological foundations of science;
2. Describe the use of research methods within differing paradigms and the types of research questions addressed by the various methods;
3. Present fundamental tensions/questions commonly faced in research design (e.g., internal/external validity, generalizability/transferability, objectivity/subjectivity, replicability);

4. Explain ethical issues in research and introduce the UNT IRB approval process that researchers must go through, and other ethical policies relevant to social science and human subject research methods; and

5. Engage students in career development opportunities as young scholars.

**Instructional Methods:**

This course is designed around the principle of, “Tell me and I forget. Teach me and I remember. Involve me and I learn.” No one approach can effectively address the range of challenges students will encounter throughout their program of study (and perhaps career), therefore, this course has been designed to introduce the breadth and depth of the skills needed for success. Throughout this course, students will be exposed to a variety of instructional methods, including direct instruction, interactive learning activities, faculty feedback, self-reflection, and peer-to-peer feedback in small groups.

**Intended Audience:**

This course is targeted towards two types of audiences:

1. “Producers” – students who need to: (a) design research, (b) conduct research, and (c) present research to target audiences.

2. “Consumers” – students who need to know how to (a) read research, (b) evaluate research, and (c) identify and use research results.

**Required Text:**


*Additional required readings will be available on Canvas.*

**Recommended Text:**

The following are not required for this course, through some readings will be made available in class from each source. They are, however, recommended as they will be beneficial for students during their course of study and careers as scientists.


(NOTE: You can find information about formatting and style in an online guidebook: [https://blog.apastyle.org](https://blog.apastyle.org); it is strongly advised that you visit the website and purchase the guide as it will be beneficial to your graduate studies.)
Course Expectations:

Each student is expected to:

1. Review online content & recorded lecture, be prepared to ask questions, to actively contribute to relevant class discussions, and turn in all assignments on time.
2. Complete the required readings for each week. Students are expected to purchase/rent/borrow the course textbook. All required readings outside of the required textbook will be provided to students on the Canvas site for the course.
3. Participate in and complete CITI training for either Biomedical or Social/Behavioral Science. Information will be provided in class and can be found here: https://research.unt.edu/researcher-resources/research-integrity-compliance/human-subjects-irb/irb-training-and-resources. A PDF confirmation/certification will be submitted with the final proposal (due December 2nd). If you have already completed the CITI training, please confirm this with me.
4. Submit written assignments to course Canvas site in PDF format.
5. Respond to discussion prompts.

Grading Procedure:

This course uses criterion-referenced grading. That is, grades are determined by performance as compared to standards for each assignment, not based on performance of other students in the class. Grades are assigned for completed class assignments and the final proposal, including IRB forms. Criteria for each assignment can be found on the course Canvas site.

Grades will be determined by the following weights:

- Class Discussions/Exercises 15%
- 1-page Statement of Research Problem 5%
- Research Questions 5%
- Literature Review 10%
- Methods 10%
- Research Proposal & IRB forms 35%
- Poster Presentation 20%

Grades Scale:

- 89.5 – 100 A
- 79.5 – 89.4 B
- 69.5 – 79.4 C
- 59.5 – 69.4 D
- 59.4 or below F
Late Policy:
No late work will be accepted. However, life happens sometimes; therefore, each student has one (1) “S*** Happens” exemption. If for whatever reason, you do not feel like you can complete an assignment by the due date, email Dr. Colombo-Dougovito at least 24 hours prior to the deadline and you will be given a 4-day extension. No questions asked; you do not need to tell me a reason for this situation. Once you use up your 1 allowed late submission, all other late or missed assignments will be graded out of a zero (0). This may not be used for the poster presentation.

Assignment Specifics:

In-class participation/Exercises (15%):
Throughout the semester, you will be asked to respond discussion prompts on Canvas and complete exercises as an individual or with a group. Ample time will be provided to complete each exercise and will be submitted either electronically. A total of 8 points will be awarded each week (12 total) plus 4 points for participating in the poster presentation for a total of 100 for the semester.

Assignment Due: On-going

1-page Statement of Research Problem & Peer Review (5%):
As an initial part of your project for the semester, you will be asked to provide a 1-page statement of a research problem. This statement should articulate a specific, significant, and novel issue by connecting the issue to the larger theoretical and/or empirical literature. The problem statement should logically flow from the introduction and clearly and succinctly establish relevance to the larger body of literature. (90 points).

*Peer review groups will be assigned immediately after the associated assignments are submitted; you will be assigned two peer reviews to complete before the following class period. (10 points).

Assignment Due: Sept. 14 Peer Review Due: Sept. 21

Research Questions & Peer Review (5%):
The next step for your final project will be to create a set of guiding research questions for your project. These questions should build off of your statement of the research problem. Your questions should be clearly written with clearly defined constructs and variables. Each question, while addressing various aspects of the problem, should be aligned and mutually supportive. Depending on the scope and breadth of the project, you should have between two and four research questions. (90 points).

*Peer review groups will be assigned immediately after the associated assignments are submitted; you will be assigned two peer reviews to complete before the following class period. (10 points).

Assignment Due: Sept. 28 Peer Review Due: Oct. 5
**Literature Review & Peer Review (10%)**

Your project needs to be situated in the current literature of your area; there needs to be an argument for “why” you feel your study is needed. Your literature review will serve as a substantive part of your final project. For this part, you will search the literature of your area, analyze, and synthesize what is “known” and where there are gaps (either in methodology or absence of comparison). This should be between 5-10 pages (excluding references) (90 points).

*Peer review groups will be assigned immediately after the associated assignments are submitted; you will be assigned two peer reviews to complete before the following class period. (10 points).*

**Assignment Due:** Oct. 19  
**Peer Review Due:** Oct. 26

**Methods & Peer Review (10%)**

The last part of your final project will be your methods section. Your methods should be guided by your statement of the research problem, your research questions, and the literature review. As you have not completed the study, you will be proposing the methods that you would use if you were to complete the study. This would include the research design, the participants recruited, the instruments used, and the planned procedures (90 points).

*Peer review groups will be assigned immediately after the associated assignments are submitted; you will be assigned two peer reviews to complete before the following class period. (10 points).*

**Assignment Due:** Nov. 2  
**Peer Review Due:** Nov. 9

**Research Proposal, IRB forms, & CITI Training (40%)**

**Research Proposal:** Each student will prepare a research proposal (no more than 15 double-spaced pages, excluding references), following APA manual guidelines, that includes: (1) title page; (2) an abstract; (3) statement of research problem; (4) a brief review of related literature that leads to a set of research questions or hypotheses; (5) research design and methods, including sampling techniques, instrumentation, procedures/data collection; and (6) limitations. (105 points).

**IRB Forms:** Each student will complete the appropriate, required Institutional Review Board (IRB) documentation forms for their research proposal. These forms will be turned in with the final proposal. (35 points)

**CITI Training:** Many assurances are put in place to ensure that researchers conduct ethical research. One part of this is completing an training in research ethics. There are several institutions that offer this training; many now use a program called Collaborative Institutional Training Initiative, or CITI.

We will discuss the procedures in class, however, you can find them here, as well: [https://research.unt.edu/researcher-resources/research-integrity-compliance/human-subjects-irb/irb-training-and-resources](https://research.unt.edu/researcher-resources/research-integrity-compliance/human-subjects-irb/irb-training-and-resources)
To complete this assignment, follow the instructions on completing human subjects research training for either Social/Behavioral Science or Biomedical (we will discuss the difference in class). Once you have completed the training, upload your completion certificate. (10 points).

**Assignment Due:** Dec. 4

**Poster Presentation (20%)**

As a culmination of the experiences of this class, you will create and present a research poster electronically to peers and KHPR faculty regarding your final project. You will design a 3x4 poster and upload it to a digital repository for the class (more information will be provide during the semester). This poster will be presented during the last week of the semester. During this week, you will be available to remotely present your poster and respond to questions of visitors through Zoom during one of several designated times. If you are not presenting your poster, you are expected to visit at least 4 other—though you may attend more—posters of others during this time. (100 points).

**Assignment Due:** Nov. 20

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**A Note for This Class During the Pandemic:**

The COVID-19 pandemic has made regular life difficult for most people. Balancing daily expectation with work commitments and graduate studies is difficult. I know many of you are balancing more than graduate school. While I will be supplying the best course possible for you during this semester, nothing can replace (completely) the benefits of face-to-face instruction. Additionally, though the deadlines present in this class are meant to be the benefit of you (the student) to ensure work is completed efficiently and does not overburden you, I recognize the uniqueness of present time. If there ever becomes a time when you are overwhelmed, please notify me and we will discuss a plan to ensure that you are as successful as possible.

**Academic Integrity Standards and Consequences:**

According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University. Any suspected case of Academic Dishonesty will be handled in accordance with the University Policy and procedures. Possible academic penalties range from a verbal or written admonition to a grade of “F” in the course. Further sanctions may apply to incidents involving major violations. You will find the policy and procedures at: [http://vpaa.unt.edu/academic-integrity.htm](http://vpaa.unt.edu/academic-integrity.htm).
Acceptable Student Behavior:
Student behavior that interferes with an instructor’s ability to conduct a class or other students’ opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The university’s expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at www.deanofstudents.unt.edu

ADA Accommodation Statement:
UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one’s specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website at disability.unt.edu.

American with Disabilities Act Compliance:
The University of North Texas is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92–112 – The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens. The designated liaison for the department is Dr. Andrew Colombo-Dougovito, Physical Education Building, Room 210-A, 940-565-3403. Copies of the Department of Kinesiology, Health Promotion and Recreation ADA Compliance Document are available in the Chair’s Office, Physical Education Building, Room 209. Copies of the College of Education ADA Compliance Document are available in the Dean’s Office, Matthews Hall 214. The student has the responsibility of informing the course instructor of any disabling conditions that will require modifications to avoid discrimination.

Family Educational Rights and Privacy Act (FERPA) Information:
Students have the right to expect their grades will be kept confidential. There are a few things, because of the size and/or nature of this class, the instructor must advise you of regarding collection and distribution of test results, quiz scores, homework assignments, roll sheets, projects, etc. During this class it may be necessary for you to pass your assignments forward to the instructor or it may be necessary for the instructor to call your name and then return your completed assignment to you by passing it across the room. The instructor, under the reasonable assumption guidelines, assumes students are collecting only their own materials. Every attempt will
be made to keep your information confidential. Neither your course grades nor grades for any assignment will be posted in a way that could result in your being identified by other students or faculty members.

**Student Evaluation Administration Dates:**

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website at www.spot.unt.edu or email spot@unt.edu.

**Note:** Extra credit will be offered for the completion of the evaluations; this will be discussed in class. I do read through these evaluations each semester and incorporate feedback from students into the upcoming semester. I greatly appreciate you taking the time to offer insightful feedback.

**Sexual Assault Prevention:**

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct. Federal laws and UNT policies prohibit discrimination on the basis of sex as well as sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking and/or sexual assault, there are campus resources available to provide support and assistance. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565-2648. If you feel you are in immediate danger, please call 911 or the police immediately. If you are experiencing any form of harassment, violence or assault, please know that you can report it to me. You should be aware that I am a mandatory reporter, which means that I am required to report these instances to the university’s Title IX coordinator or Deputy Title IX Coordinator to investigate.

**Emergency Notification & Procedures:**

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Blackboard for contingency plans for covering course materials.
Tentative Course Schedule, Readings, and Assignment Due Dates:

Week 1 (Aug. 24, 2020): What is research anyway?

Overview:
This week, we will start with an introduction to the course expectations and format. We will also cover an introductory delve into “what is research”. We will cover the basics of what makes a research study, why we conduct research, and set the foundations for further topics and discussions for the semester.

Reading(s):

Assignments:
None.

Week 2 (Aug. 31, 2020): Start to finish…What do we do? The researcher’s role in research.

Overview:
This week, we will begin to address how the researcher fits within the research process. How does one’s world view impact the type of research that they do? How is research influenced by our own biases? The questions we ask? By understanding the foundation of what makes research, we will be better prepared to create sound research studies that address the intended problems of our research.

Reading(s):


Assignments:
Prior to class, brainstorm your intentions for completing research. What are you interested in? Why is this important?
Week 3 (Sept. 7, 2020): Labor Day!

Overview:
We have no recorded lecture this week. Please use this time to familiarize yourself with Canvas and prepare yourself for the coming weeks (that includes rest). During this time, continue to consider your research interests and potential ideas for projects (don’t limit yourself)—this will help you complete you Statement of the Research Problem.

Reading(s):
None.

Assignments:
None.

Week 4 (Sept. 14, 2020): The subtle art of asking the “right” questions?

Overview: How does the research question impact the overall study? How do you know what a good research question is? This week, we will explore the development of research questions and how that influences the rest of the decisions that are made during the design phase of a research project.

Reading(s):

Assignments:
1-page Statement of Research Problem due on Sept. 14 at 11:59 pm.

Week 5 (Sept. 21, 2020): Ethics, sm’ethics.

Overview: Not that long-ago research was a wild west of methodology—leading to many ethical issues. While procedures exist to reduce the likelihood of unethical research, conducting research can be like walking a tightrope depending on the topic, population and procedures. This week, we will discuss what makes ethical and unethical research, as well as what we can do to ensure that we are being ethical in our own research.

Reading(s):
Assignments:
Peer Review of Statement of Research Problem due on Sept. 21 at 11:59 pm; meet with peer review group to discuss by the following Friday at 11:59 pm.

Week 6 (Sept. 28, 2020): It’s all about the numbers, baby! Quantitative methods part 1.
Overview: This week, we will cover everything numbers. We will begin by covering the basics of quantitative analysis (e.g., central tendency, variability, probability, means, normal distributions, etc.) and how we might measure those. We will cover various quantitative designs (e.g., quasi-experimental, descriptive, correlational, etc.) for answering quantitative questions and the tools that can be employed.

Reading(s):

Assignments:
Research Questions due on Sept. 28 at 11:59 pm.

Week 7 (Oct. 5, 2020): What do you mean it’s not significant? Quant methods part 2.
Overview:
This week, we will continue our investigation of quantitative methods. We will analyze how to understand threats to the validity of experimental designs. Most importantly, we will cover how to evaluate and interpret quantitative findings. Additionally, we will discuss how to conduct a literature review.

Reading(s):


Assignments:
Peer Review of Research Questions due on Oct. 5 at 11:59 pm; meet with peer review group to discuss by the following Friday at 11:59 pm.
Locate one research article from your discipline that uses quantitative methods.

**Week 8 (Oct 12, 2020): Words, words, and more words. Qualitative methods part 1.**

**Overview:**
Continuing our investigation of research methods, we will turn to the opposite side of the spectrum—qualitative methods. Like our quantitative counterpart, we will discuss different forms of qualitative data and designs, as well as the types of questions/problems we can address through qualitative data. We will also briefly discuss how to analyze qualitative data and interpret findings.

**Reading(s):**
Kowalski et al. (2018). Data Analysis in Qualitative Designs (Chpt. 8, pp. 152-176).

**Assignments:**
None.

**Week 9 (Oct 19, 2020): Going native, like Jane Goodall. Qual methods part 2.**

**Overview:**
This week, we will discuss the how to determine the trustworthiness of qualitative analysis. We will cover strategies to ensure our own research meets those qualifications. Lastly, we will practice our own reflexivity in an applied example.

**Reading(s):**
Kowalski et al. (2018). Evaluating the Merits of Qualitative Research Studies in Kinesiology (Chpt. 9, pp. 177-197).

**Assignments:**
Literature Review due on Oct. 19 at 11:59 pm.
Find one research article from your discipline that uses qualitative methods.
**Week 10 (Oct. 26, 2020): Playing in both sandboxes. Mixed methods part 1.**

**Overview:**

What if your question calls for the use of more than one method? This week, we will cover an emergent form of research—mixed methods designs. Using our previous knowledge of quantitative and qualitative designs, we will push further to understand how these two types of data could be combined to build deeper interpretations or triangulate findings to capture a broader understanding of the problem.

**Reading(s):**


**Assignments:**

Peer Review of Literature Review due on Oct. 26 at 11:59 pm; meet with peer review group to discuss by the following Friday at 11:59 pm.

**Week 11 (Nov. 2, 2020): What do you mean there needs to be integration!?! MM part 2.**

**Overview:**

This week, we will conclude our design discussions with how to integrate and interpret mixed methods research. We will discuss strategies to ensure that data work together and that interpretations are meaningful. We will also discuss when it is not appropriate to use a mixed methods approach.

**Reading(s):**


**Assignments:**

Methods due on Nov. 2 at 11:59 pm.
Find one research article from your discipline that uses mixed or multiple methods.

Week 12 (Nov. 9, 2020): Let’s talk about how to talk about research.

Overview:
This week, we will discuss how to translate knowledge in kinesiology. We will cover how to write up a research study after analysis is complete. This will include a primer on how to present research findings as an oral or poster presentation.

Reading(s):

Assignments:
Peer Review of Methods due on Nov. 9 at 11:59 pm; meet with peer review group to discuss by the following Friday at 11:59 pm.
Post draft of poster presentation to Canvas on Nov. 9 at 11:59pm.

Week 13 (Nov. 16, 2020): Small Group Consultations

Overview:
We will not have a recorded lecture this week. Instead, you will sign up for a small group consultation with me to discuss any remaining questions, concerns, or issues you have with your final project. Sign-up will be first-come/first-serve and will be made available at 5 pm on Nov. 11th. If the available times do not work for you, message me ASAP to find an alternative.

Reading(s):
None.

Assignments:
Poster presentation (pdf file of poster) due on Nov. 20 at 11:59 pm.

Week 14 (Nov. 23, 2020): Thanksgiving!

Overview:
We will not have class this week. Before taking a break for the holiday, please confirm the required materials for our virtual presentation are submitted to Canvas. Use this extra time to prepare for your presentation.

Reading(s):
None.

Assignments:
None.
Week 15 (Nov. 30, 2020): It’s time to show off!

Overview:
This week, you will present your research poster to classmates, peers and KHPR/UNT Faculty. The exact times are TBD. As this will be remote, if you are not presenting, you must attend at least 4 other presentations.

Reading(s):
None.

Assignments:
Research Proposal, IRB forms, & CITI Training due on Dec. 4 at 11:59 pm.