

HHD 1031: Research in Sports Science (Fall 2023)
University of Pittsburgh
School of Education
Department of Health and Human Development
Health, Physical Activity, and Exercise Program

Instructors:	Anthony Holmes, MSc and Brian Galla, PhD
Class Schedule:	Tu/Th 11:00AM-12:15PM (sec 1030) or 1:00PM-2:15PM (sec 1035)
Class Location:	166 Trees Hall
Office Hours:	by appointment
Email:	ajh202@pitt.edu and gallabri@pitt.edu

LEARNING OBJECTIVES

Understand the process and ethics of research.
Learn how to read and interpret scientific research articles.
Understand the design, strengths, and weaknesses of different study types.
Propose, test, and report a research study question.

REQUIRED SOFTWARE

Excel (available for free through software downloads at my.pitt.edu)

GRADING

Attendance (20%): Students are expected to attend every class and participate in discussions. The instructors will take attendance during each class. Absences will be excused only with prior permission from the instructor. (Showing up to class late or leaving early—without prior permission—will result in half attendance points.)

Exam 1 (25%): The first exam will cover material from classes 1 to 13.

Exam 2 (25%): The second exam will cover material from classes 15 to 22.

Group Lab Report (20%): Groups will submit a lab report on a research topic developed during the semester.

Group Presentation (10%): Groups will present findings from their lab report to the class in a 5-to-10-minute format.

Grading Scale: Your final grade will be calculated by dividing the number of points earned by the number of points possible, weighted by each section.

A+	≥	97%	C+	=	77-79.9%
A	=	94-96.9%	C	=	74-76.9%
A-	=	90-93.9%	C-	=	70-73.9%
B+	=	87-89.9%	D+	=	67-69.9%
B	=	84-86.9%	D	=	64-66.9%
B-	=	80-83.9%	D-	=	60-63.9%
			F	<	60%

THE FINE PRINT

Students in this course will be expected to comply with the [University of Pittsburgh's Policy on Academic Integrity](#). Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. A minimum sanction of a zero score for the assignment will be imposed for any assignments that violate these obligations, with possible additional consequences, including failure of the course for the semester.

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and [Disability Resources and Services](#) (DRS), 140 William Pitt Union, (412) 648-7890, drsrecep@pitt.edu, (412) 228-5347 for P3 ASL users, as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use.

Use of cell phones during class will not be permitted. Please silence your phones during the class period.

SCHEDULE OF CLASSES

The following course schedule may change at the discretion of the instructors. We will notify students via Canvas about any changes made to the schedule. All class materials will be made available on Canvas before each class.

Date	Topic	Assignments
Class 1 8/29 Holmes/Galla	Introduction to Research Parts of a Research Paper Lab: Basic Research Concepts	
Class 2 8/31 Galla	Research Ethics Lab: Case Studies in Research Ethics	Class 2 Online Lecture and Lab
Class 3 9/5 Holmes	Measurement in Research I Lab: Measuring Physical Activity	Class 3 Online Lecture and Lab
Class 4 9/7 Holmes	Basic Statistical Concepts and Measurement in Research II (Statistics) Lab: Statistics used to test Validity and Reliability	Class 4 Online Lecture and Lab
Class 5 9/12 Holmes	Measurement in Research III Lab: Measurement Article Review 'Validity of reliability of the Fitbit Zip as a measure of preschool children's step count' Sharp et al. 2017	Class 5 Lab
Class 6 9/14 Galla	Survey Research I Lab: Survey Research Statistics Sampling and Population Statistics	Class 6 Online Lecture and Lab
Class 7 9/19 Galla	Survey Research II Lab: Survey Research Article 'Trends in meeting physical activity guidelines among urban and rural dwelling adults' by Whitfield et al. 2019	Class 7 Online Video and Lab
Class 8 9/21 Galla	Survey Research III Lab: Group Survey Decision	<i>Find Survey Instrument for Group Lab Report</i>
Class 9 9/26 Holmes	Epidemiological Research I Lab: Inferring Cause and Effect from Epidemiological Study Designs	Class 9 Online Lecture and Lab

SCHEDULE OF CLASSES (CONT'D)

Date	Topic	Assignments
Class 10 9/28 Galla	Associations and Predictions Lab: Correlations and Linear Regression	Class 10 Online Lecture and Lab
Class 11 10/3 Galla	Guest Lecture with Pro Athlete	
Class 12 10/5 Holmes	Epidemiological Research II Lab: Epidemiological Study Article 'Steps per day and all-cause mortality in middle-aged adults...' by Paluch et al. 2021	Class 12 Lab
Class 13 10/10 Holmes/Galla	Midterm Review	
Class 14 10/12 Holmes/Galla	Class 14 Midterm I	
Class 15 10/17 Holmes	Experimental Research I Lab: Internal/External Validity	Class 15 Online Lecture and Lab
Class 16 10/19 Galla	Group Comparisons Lab: Group Comparisons	Class 16 Online Lecture and Lab
Class 17 10/24 Galla	Experimental Research II Lab: Strengths and Weaknesses of Experimental Designs	Class 17 Online Lecture and Lab
Class 18 10/26 Holmes	Experimental Research III Lab 17: Randomized Crossover Study Article 'Energy expenditure in vinyasa yoga vs. walking' by Sherman et al. 2017	Class 18 Lab
Class 19 10/31 Galla	Experimental Research IV Lab 18: Randomized Controlled Trial Article 'Polarized training has greater impact on key endurance variables than threshold, high intensity, or high volume training' by Stoggl and Sperlich 2014	Class 19 Lab

SCHEDULE OF CLASSES (CONT'D)

Date	Topic	Assignments
Class 20 11/2 Holmes	Systematic Review & Meta-Analysis I Lab: Interpreting Quality and Results of a Meta-Analysis	Class 20 Online Lecture and Lab
Class 21 11/7 Holmes	Systematic Review & Meta-Analysis II Lab: Meta-Analysis Article Review 'Impact of resistance training on blood pressure and other cardiovascular risk factors' by Cornelissen et al. 2010	Class 21 Lab
Class 22 11/9 Holmes/Galla	Midterm II Review	<i>Complete Online Survey for Group Lab Report</i>
Class 23 11/14 Holmes/Galla	Midterm II	
Class 24 11/16 Holmes/Galla	Designing a Research Study Lab: Writing your Group Lab Report – Introduction and Method	
Class 25 11/28 Holmes/Galla	Performing and Reporting a Research Study Lab: Writing your Group Lab Report – Results and Discussion	
Class 26 11/30 Holmes/Galla	Meetings with instructors to complete Group Lab Report	
Class 27 12/5 Holmes/Galla	Meetings with instructors to work on presentations	<i>Group Lab Report Due</i>
Class 28 12/7 Holmes/Galla	Group Presentations	