

**UNIVERSITY OF PITTSBURGH**  
**School of Education**  
**Department of Health and Human Development**  
**Health, Physical Activity, and Exercise Program**  
**HPA 1031: Research in Sports Science**  
**Fall 2020**

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**Instructors:** Bethany Barone Gibbs, PhD and Brian Galla, PhD  
**Class Schedule:** Tu/Th 11:05AM-12:20PM (sec 1030) or 1:15PM-2:30PM (sec 1035)  
**Class Location:** Online/Zoom  
**Office Hours:** by appointment  
**Email:** [bbarone@pitt.edu](mailto:bbarone@pitt.edu) and [gallabri@pitt.edu](mailto:gallabri@pitt.edu)

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**Required Software:**

Excel (available for free through software downloads at [my.pitt.edu](http://my.pitt.edu))

**Objectives:**

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

**Grading:**

1. **Attendance Quizzes (20%)**
2. **Exams (50%)**

Exams	Description	Material Covered
Midterm Exam I (25%)	Multiple choice and short answer exam	Classes 1-13
Midterm Exam II (25%)	Multiple choice and short answer exam	Classes 15-25

Note: students may need a calculator to take exams.

3. **Group Lab Report (20%):** Groups will submit a lab report on a research topic developed during the semester.
4. **Group Rapid Fire Presentation (10%):** Groups will present findings from their lab report to the class in a 5-minute rapid fire 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	=	93-96.9%	C	=	73-76.9%
A-	=	90-92.9%	C-	=	70-72.9%
B+	=	87-89.9%	D+	=	67-69.9%
B	=	83-86.9%	D	=	63-66.9%
B-	=	80-82.9%	D-	=	60-62.9%
			F	=	<60%

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You are expected to adhere to the University of Pittsburgh's Policy regarding academic integrity. Any student exhibiting any form of academic dishonesty such as plagiarism, etc. will receive an automatic "F" for the assignment. Additionally, the student will be reported to the appropriate university officials, and it will go on file in the student's academic record.

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

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, 216 William Pitt Union, (412) 648-7890 / (412) 383-7355 (TTY)**, as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

Absences will be excused only with a doctor's note, newspaper evidence of obituary, etc. Please contact Dr. Gibbs or Dr. Galla directly by email to request an excuse.

**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.

<b>Date</b>	<b>Topic</b>	<b>Assignments</b>
Class 1 8/20 Gibbs/Galla	<b>Introduction to Research</b> <b>Parts of a Research Paper</b> Lab: Basic Research Concepts	
Class 2 8/25 Galla	Attendance Quiz <b>Research Ethics</b> Lab: Case Studies in Research Ethics	Class 2 Online Lecture and Lab
Class 3 8/27 Gibbs	Attendance Quiz <b>Measurement in Research I</b> Lab: Measuring Physical Activity	Class 3 Online Lecture and Lab
Class 4 9/1 Gibbs	Attendance Quiz <b>Basic Statistical Concepts and Measurement in Research II (Statistics)</b> Lab: Statistics used to test Validity and Reliability	Class 4 Online Lecture and Lab
Class 5 9/3 Gibbs	Attendance Quiz <b>Measurement in Research III</b> Lab: Measurement Article Review Article TBD	Lab
Class 6 9/8 Galla	Attendance Quiz <b>Surveys Research I</b> Lab: Survey Research Statistics Sampling and Population Statistics	Class 6 Online Lecture and Lab
Class 7 9/10 Galla	Attendance Quiz <b>Survey Research II</b> Lab: Survey Research Article 'Trends in Meeting Physical Activity Guidelines Among Urban and Rural Dwelling Adults' Whitfield et. al., 2019	Lab
Class 8 9/15 Galla	Attendance Quiz <b>Finding Research Articles</b> Lab: Literature Search	Class 8 Online Lecture and Lab
Class 9 9/17 Galla	Attendance (sign in) <b>Survey Research III</b> Lab: Group Survey Defense	<i>Find Survey Instrument for Group Lab Report</i>

<b>Date</b>	<b>Topic</b>	<b>Assignments</b>
Class 10 9/22 Gibbs	Attendance Quiz <b>Epidemiological Research I</b> Lab: Inferring Cause and Effect from Epidemiological Study Designs	Class 10 Online Lecture and Lab
Class 11 9/24 Gibbs	Attendance Quiz <b>Relationships and Predictions</b> Lab: Correlations and Linear Regression	Class 11 Online Lecture and Lab
Class 12 9/29 Gibbs	Attendance Quiz <b>Epidemiological Research II</b> Lab: Epidemiological Study Article 'Sedentary Time, Physical Activity, and Adiposity' Barone Gibbs, et. al. 2017	Lab
Class 13 10/1 Gibbs/Galla	<b>Midterm Review</b>	
Class 14 10/6 Gibbs/Galla	Class 14 <b>Midterm I</b>	
Class 15 10/8 Gibbs	Attendance Quiz <b>Experimental Research I</b> Lab: Internal/External Validity	Class 15 Online Lecture and Lab
Class 16 10/13 Galla	Attendance Quiz <b>Group Comparisons</b> Lab: Group Comparisons	Class 16 Online Lecture and Lab
Class 17 10/15 Galla	Attendance Quiz <b>Experimental Research II</b> Lab: Strengths and Weaknesses of Experimental Designs	Class 17 Online Lecture and Lab
Class 18 10/20 Gibbs	Attendance Quiz <b>Experimental Research III</b> Lab 17: Randomized Crossover Study Article 'Energy Expenditure in Vinyasa Yoga vs. Walking' Sherman et. al., 2017	Lab
Class 19 10/22 Galla	Attendance Quiz <b>Experimental Research IV</b> Lab 18: Randomized, Controlled Trial Article 'A volitional help sheet to increase physical activity in people with low socioeconomic status: A randomised exploratory trial' Armitage & Arden (2010)	Lab

<b>Date</b>	<b>Topic</b>	<b>Assignments</b>
Class 20 10/27 Gibbs	Attendance Quiz <b>Systematic Review &amp; Meta-Analysis</b> Lab: Interpreting Quality and Results of a Meta-Analysis	Class 20 Online Lecture and Lab
Class 21 10/29 Gibbs	Attendance Quiz <b>Systematic Review &amp; Meta-Analysis II</b> Lab: Meta-Analysis Article Review 'Impact of Resistance Training on Blood Pressure and Other Cardiovascular Risk Factors' by Cornelissen, et. al. 2010	Lab
Class 22 11/3 Galla	<b>Midterm II Review</b>	<i>Complete Online Survey for Group Lab Report</i>
Class 23 11/5 Galla	<b>Midterm II</b>	
Class 24 11/10 Gibbs/Galla	Attendance (sign in) <b>Designing a Research Study</b> Lab: Writing your Group Lab Report – Introduction and Method	
Class 25 11/12 Gibbs/Galla	Attendance (sign in) <b>Performing and Reporting a Research Study</b> Lab: Writing your Group Lab Report – Results and Discussion	
Class 26 11/17 Gibbs/Galla	Meetings with Drs. Gibbs and Galla to complete Group Lab Report	
Class 27 11/19 Gibbs/Galla	Meetings with Drs. Gibbs and Galla to work on rapid fire presentations	<i>Group Lab Report Due</i>
Class 28 12/1 Gibbs/Galla	Group Rapid Fire Presentations	