

**Experimental Psychology: Human Behavior  
W1420 – Spring 2016**

**Instructor Information:**

Patricia Lindemann  
 Office: 358 Schermerhorn  
 Office hours: Tues/Thurs 11-12, or by appointment  
 E-mail: PGL2@columbia.edu

Lecture: Mon: 4:10-6:00, 614 Schermerhorn

Lab Time	Lab Instructor	Office Hours
Lab Sec 1: Mon 6:10-8:00, 200B Sch	Kaytee Turetsky	Tues, 3:30-5:30pm, 510 Sch
Lab Sec 2: Mon 6:10-8:00, 200C Sch	Claudia Schneider	Mon, 2-4pm, 419 Sch
Lab Sec 3: Mon 8:10-10:00, 200B Sch	Kaytee Turetsky	Tues, 3:30-5:30pm, 510 Sch
Lab Sec 4: Wed 6:10-8:00, 200B Sch	Maya Rossignac-Milon	Tues & Wed, 12-1pm, 329 Sch

See Courseworks for Psyc 1421 for lab-related information specific to your own section.

**Brief Course Description**

An introduction to research methods employed in the study of human behavior in psychology with a focus on studies in the areas of cognition and perception. Students will gain experience in the design and conduct of research, including ethical issues, observation and measurement techniques, interpretation of data, and preparation of written and oral reports.

A previous course in statistics is required. Without some background in statistics, it would be very difficult to get the most out of this course. The basics of statistical methods necessary to understand the data analysis will be covered/reviewed in this course.

**The reading list and weekly syllabus (subject to revision)**

**Textbook:**

Passer, M.W., (2014). *Research Methods: Concepts and Connection*. New York: Worth.

Note: Additional weekly readings will be listed (and posted) on the Courseworks class website.

**Course Outline, Readings, and Assignments**

Date	Lecture	Lab	Readings
<b>WEEK 1</b>			
Jan 25	Introduction	<u>Introduction</u>	• Chapter 1: Science and Psychology
	Scientific Method	• Group decision making task	
		<u>Project 1 – Mini-lab</u>	
		• Data Collection	

Date	Lecture	Lab	Readings
<b>WEEK 2</b>			
Feb 1	How to Read/Write a Scientific Paper  Lab 1 (Mini-lab) Introduction	<u>Project 1 – Mini-lab</u> <ul style="list-style-type: none"> <li>Developing hypotheses</li> <li>The variables in your data</li> <li>Intro to SPSS</li> <li>Descriptive statistics</li> <li>Correlations</li> </ul>	<ul style="list-style-type: none"> <li>Statistics Modules - 1-5 and 12. Note that we will be returning to the intervening modules. This is to get your feet wet.</li> <li>Chapter 5: Correlation and Correlational Research - (Basic Concepts pp. 134-141)</li> <li>Appendix A: Communicating Research Results - pg A1 - A14.</li> <li>Additional articles</li> </ul>
<b>WEEK 3</b>			
Feb 8	Understanding Theories  Confirmation and Disconfirmation	<u>Project 1 - Mini lab</u> <ul style="list-style-type: none"> <li>Developing more hypotheses</li> <li>T-tests vs. correlations</li> <li>How to write up your lab report</li> </ul>	<ul style="list-style-type: none"> <li>Statistics Modules 6-9</li> <li>Chapter 8: Single Factor Experimental Designs (Read The Logic of Experimentation and Manipulating Independent Variables, pp. 229-239, Skim Between-Subjects Designs and Within-Subjects Designs for the gist, pp. 239-258. We will return to these sections later.)</li> <li>Appendix A: Communicating Research Results - pg A1 - A14. (review and use as a resource for paper writing)</li> <li>see OWL online for final word on formatting guidelines!!</li> <li>Additional articles</li> </ul>
<b>WEEK 4</b>			
Feb 15	Validity, Reliability and Measurement	* <u>Project 1 - Mini-lab</u> <ul style="list-style-type: none"> <li>Mini-lab report DUE</li> </ul> <u>Project 2 – Full-lab</u> <ul style="list-style-type: none"> <li>Project Development</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 4: Defining and Measuring Variables</li> <li>Chapter 10: Experimentation and Validity - (Critical Thinking, Inference and Validity and Types of Validity, pp. 291-301)</li> <li>Additional article(s)</li> </ul>

Date	Lecture	Lab	Readings
<b>WEEK 5</b>			
Feb 22	Basic statistics review  Analyzing Data from Lab 2  Introduction to Tables and Figures	* <u>Project 1 – Mini-lab</u> <ul style="list-style-type: none"> <li>Lab reports will be returned this week (hopefully on lab day)</li> <li>Revisions due Wed, Mar 2 for Monday lab sections and Fri, Mar 4 for Wed lab section</li> </ul> <u>Project 2 – Full-lab</u> <ul style="list-style-type: none"> <li>Data collection</li> <li>Understanding 2X2 ANOVA</li> <li>Presenting data (tables and figures)</li> </ul>	<ul style="list-style-type: none"> <li>Statistics Modules: Review 1-9 and 12, Read 10-11, 13-16</li> <li>Chapter 9: Factorial Designs</li> <li>Additional article(s)</li> </ul>
<b>WEEK 6</b>			
Feb 29	Midterm 1 (covering everything up to this point <b>except</b> ANOVA)	<u>Project 1 - Mini-lab</u> <ul style="list-style-type: none"> <li>Final questions about revisions</li> <li>*Revised write ups due this week Mar 4 (Mon labs) and Mar 6 (Wed lab)</li> </ul> <u>Project 2 – Full-lab</u> <ul style="list-style-type: none"> <li>2X2 ANOVA Analysis</li> <li>Lab report due in lab next week</li> </ul>	
<b>WEEK 7</b>			
Mar 7	Developing Research Ideas And Considering a Research Design  Choosing a Research Design,  Experimental vs. Correlational Research	* <u>Project 2 - Full-lab</u> <ul style="list-style-type: none"> <li>Lab report due</li> </ul> <u>Project 3 - Proposals</u> <ul style="list-style-type: none"> <li>Brainstorming</li> <li>Literature Search</li> <li>Strategies for a successful oral presentation</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 2: Conducting Psychological Research</li> <li>Chapter 5: Correlation and Correlational Research - (Review pp. 133-141, Read pp. 141-163)</li> <li>Chapter 10: Experimentation and Validity - (Basic Threats to Internal Validity, pp. 302-307)</li> </ul>

Date	Lecture	Lab	Readings
<b>WEEK 8</b>			
Mar 21	Research Design: Your Participants Your Method	* <u>Project 3 – Your proposal</u> • (Brief) Oral Presentations	<ul style="list-style-type: none"> <li>• Chapter 7: Survey Research</li> <li>• Chapter 8: Single-Factor Experimental Designs - (Review pp. 229-239, Read pp. 239-258)</li> </ul>
<b>WEEK 9</b>			
Mar 28	Research Design: More about Methods	* <u>Project 3 – Your proposal</u> • Written proposal DUE <u>Project 4 – Group Project</u> • Group formation • Project development • Materials development	<ul style="list-style-type: none"> <li>• Chapter 6: Case-Studies and Observational Research</li> </ul>
<b>WEEK 10</b>			
April 4	Midterm 2 (cumulative)	<u>Project 4 – Group Project</u> • Pilot testing • Peer feedback on materials	
<b>WEEK 11</b>			
April 11	Ethical Issues	<u>Project 4 – Group Project</u> • Additional pilot testing and feedback • Finalizing materials • Planning statistical tests • *submit final materials to your lab TA by Friday Apr 15	<ul style="list-style-type: none"> <li>• Chapter 3: Conducting Ethical Research</li> <li>• Appendix B: APA Ethical Principles)</li> </ul>
<b>WEEK 12</b>			
April 18	Data Collection Day!	<u>Project 4 – Group Project</u> • Organizing, Entering and Analyzing your data	
<b>WEEK 13</b>			
April 25	Other Research Approaches	<u>Project 4 – Group Project</u> • Data Analysis	<ul style="list-style-type: none"> <li>• Chapter 10: Experimentation and Validity - (Other Issues Concerning Experimental Control and Strategies for Replication, pp. 307-321)</li> <li>• Chapter 11: Quasi Experimental Design</li> <li>• Chapter 12: Single-Case Experimental Design</li> </ul>

<b>WEEK 14</b>	
May 2 4-8pm	<u>Group Project Research</u> <u>Symposium</u> Student Presentations (and baked goods) **Final lab reports DUE May 5**
<b>WEEK 15</b>	
Mon, May11 4:10-7pm	<b>Final Exam (cumulative)</b>

### Course Requirements

Each week, you will attend a two-hour lecture on Monday afternoon and a two-hour lab section later in the week. Attendance for lab sections is mandatory, and discussion/participation during sections is strongly encouraged and counts towards your final grade. If you are unsure about what is expected of you in terms of lab participation and/or find it difficult to talk during class, please speak to your TA. We want to find ways to make it comfortable for everyone to contribute, express themselves, and have their questions addressed during lab.

In the lab section you will complete four different research projects. The first two are prescribed projects – an introductory, “mini-lab” and a slightly more extensive “full-lab,” which will introduce you to the logic and design of psychological research, how to approach data analysis and interpretation, and how to present empirical findings. The objective is to introduce these concepts step-by-step so that you can become comfortable with each element. The third project will be to develop your own project proposal, which you will briefly present orally to your peers for feedback before you write it up. Finally, we will select some of your proposals to develop into full projects.

By going through the process of developing, conducting, and reporting on research multiple times in different ways, you will become more and more familiar with and comfortable with the process. In the end, you will be fully immersed in the development, design, execution, analysis, and presentation of unique research studies and you will present your findings to the class in our final research symposium.

To make sure that you have a basic grounding in the concepts that you apply in the lab, there will also be two midterms and a final exam. Just as the labs are intended to give you an opportunity to actually practice the research process, the exams will emphasize application of knowledge to design and critique real and hypothetical experiments. There will be limited emphasis on memorizing definitions. Instead, we will be looking to see if you can use the concepts you have learned.

Grading is allocated as follows:

<u>Exams (45% of final grade)</u>	
Midterm 1	10%
Midterm 2	15%
Final (cumulative)	20%
 <u>Lab Participation/Attendance</u>	
	5%
 <u>Lab Projects (50% of final grade)</u>	
Project 1 - Mini-lab	5%
Project 2 – Full-lab	10%
Project 3 – Your proposal (oral)	5%
Project 3 – Your proposal (written)	10%
Project 4 – Group project (oral)	5%
Project 4 – Group project (written)	15%

### **Academic Integrity**

"The intellectual venture in which we are all engaged requires of faculty and students alike the highest level of personal and academic integrity. As members of an academic community, each one of us bears the responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity. . . . In practical terms, this means that, as students, you must be responsible for the full citations of others' ideas in all of your research papers and projects; you must be scrupulously honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet agent."

From the Faculty Statement on Academic Integrity -

<https://www.college.columbia.edu/academics/integrity-statement>

Cheating on assignments or exams and plagiarism are very serious violations within the academic community. You are expected to do your own work on all tests and assignments for this class. Neglecting to cite sources in a paper is considered plagiarism. Copying text from another student is considered plagiarism. So is writing a paper together, even if each of you put it in your own words. This can be confusing when it comes to labs you work on with a partner or group projects, so please check with me or your TA if you have any questions about what is or is not OK. Here are some basics:

OK:

- You can discuss ideas with others (your lab partner, your TA, your mom).
- You can work on statistical analyses with others especially your lab partner.
- You SHOULD please use the templates we give you for presenting statistical analyses. You CAN copy this language exactly without citations.
- Feel free to double check formatting rules with others. Remember the Purdue OWL website for APA formatting is the final word on formatting for this class.
- You can have a friend proofread or go to the writing center.

Remember - IF YOUR PAPER IS VERY SIMILAR TO YOUR LAB PARTNER'S, IT LOOKS LIKE PLAGIARISM. THE BEST WAY TO AVOID THIS IS TO AVOID PLANNING/WORKING ON YOUR PAPERS TOGETHER. If you don't plan the papers together, you won't use the same arguments, structure, or format, even if you are using the same data.

Some things that are NOT OK:

- Don't work together when you write your paper. Your arguments may end up so similar that it will constitute plagiarism.

- If you are working with a partner on a project, do not share an outline. There are many ways to present the same basic story. We expect yours to be your own.
- Don't copy figures or tables from someone else. Make your own.
- For group projects - Don't copy from the slides used for group presentations.
- For group projects - Don't copy text or specific arguments from the project proposal.
- And don't forget proper citations! ALWAYS cite other people's work. If in doubt, cite.

If you have any question about whether or not something is acceptable in your written work, please ask. As noted above, these rules can sometimes be confusing, especially when you are working with one or more partners in the lab section.

And finally, as part of this academic community you are expected to always act in accordance with the Columbia honor code. Any student found cheating or plagiarizing in this class will be reported to Columbia's Office of Judicial Affairs and Community Standards for evaluation and academic discipline. If you have questions about any aspect of academic integrity at Columbia, please refer to the following link: <https://www.college.columbia.edu/academics/integrity> and if you have specific questions about sanctions or the judicial process: see <https://www.college.columbia.edu/academics/disciplinaryprocess>

### **Students with Disabilities:**

If you are a student with disabilities taking this course who may need disability related classroom accommodations, please let me know as soon as possible. The lab reports in this course require a degree of organization and structure that is particularly challenging for some students with disabilities. If you feel this may describe you, please let us know. We can arrange a schedule for you to submit sections of the paper rather than having to complete the whole thing in one shot. Some students find this makes these projects much more manageable. We will offer this accommodation to any student, but again we have found it is particularly helpful to students who know they have difficulty with implementing structure on their own.

If you are a student with disabilities, please stop by the Office of Disability Services (ODS) on the Wien Hall, Suite 108A to register for support services, if you have not done so already. ODS Phone (212) 854-2284. If you are eligible for extra exam time you should be certain to fill out the appropriate paperwork at the Office of Disability Services. Once I have received confirmation of your status, I will be able to make arrangements for additional exam time. Note that ODS may require up to 2 weeks to process an application, so don't wait until midterm week to get in touch with them.