

# BEHAVIORAL RESEARCH METHODS AND ANALYSIS

## Instructor Information

Dr. Kate Turetsky (she/her)  
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## Course Information

Diana LL103  
Tuesdays & Thursdays  
10:10 - 11:25am

**Teaching Assistant:** Michelle Lee, [mmlee@barnard.edu](mailto:mmlee@barnard.edu)

**Preceptor:** Jane Song, [jms2486@barnard.edu](mailto:jms2486@barnard.edu)

**Office Hours (your time to stop by to ask us questions or say hi!) - on Zoom for now (see links under "Zoom Class Sessions" on Courseworks):** **Prof. Turetsky:** Tuesdays 1-3pm; **Michelle:** Thursdays 4-6pm

## Course Description

This class will introduce students to the fundamental scientific principles, experimental methods, and analytical approaches involved in the study of human behavior. The initial major topics to be covered include how basic scientific approaches can be gainfully and ethically used to study human behavior. The following topics in the course will cover the most prevalent manners of collecting data in behavioral research and the most common types of statistical analyses and tests such data is subjected to. The latter topics in the course will introduce some of the more advanced experimental designs and statistical approaches that are more specific to the social sciences.

**Prerequisite or corequisite:** BC1001 (Introduction to Psychology) or permission of the instructor.

## Learning Goals

In this course, I aim to help you:

- Understand fundamental scientific principles, the strengths and limitations of different research methods, and the ethical considerations involved in conducting research on human behavior
- Develop research ideas and turn them into testable questions
- Understand, interpret, and critically evaluate scientific research in psychology
- Gain experience with practical research skills used in academic, corporate, and other settings, including citation management, survey creation, and data analysis and visualization

## Course Readings

This course uses a free, open-access textbook, which is available on Courseworks as a pdf: Jhangiani, Chiang, Cuttler, & Leighton (2019). *Research Methods in Psychology* (4th edition). Supplemental readings are also posted on Courseworks.

## Course Requirements

### Grading Breakdown

Lecture Participation Worksheets	25%
Hands On Activities	30%
Midterm	20%
Final	25%

### Lecture Participation Worksheets

Most lectures have worksheets to facilitate your active participation in class. These worksheets give you a chance to practice applying what we are learning as we are learning it. Worksheets will be posted to Courseworks prior to lecture, should be completed during the time allotted in lecture (whether in person or on Zoom), and **should be turned in on Courseworks within 24 hours of lecture.**

**Every student may miss two worksheets without penalty,** no questions asked. You do not need to inform us when you are taking these two passes. Courseworks will automatically drop them from your grade at the end of the semester. If you are unable to attend a lecture synchronously due to illness or other reasons, please reach out to arrange an extension so that you can complete the worksheet when you watch the recording (or feel free to take one of your passes).

Worksheets are graded based on completion, not correctness. However, we encourage you to pay careful attention to your experience completing the worksheets. It is often difficult to tell whether you really understand methodological concepts until you try using them, so **if you're confused about a particular question on a worksheet or feel that your answer might not have been correct, please take note and come to office hours.** We will be happy to clarify things with you.

### Hands On Activities

There are 8 class sessions in which we will complete hands on activities. These are essentially labs that focus on development of practical research skills and experience. They will typically begin with a short tutorial, followed by time for you to begin working through the activity with us available for questions. These activities require a computer with internet access, and sometimes will require you to download (free) software. You may bring a laptop to class or Zoom in remotely from home, a computer lab, the library, etc. You may work together on these activities, but each student will need to complete the activity themselves and turn in their own original work. **Hands on activities are due to Courseworks one week after they are assigned, unless otherwise stated.**

### Exams

This class has a midterm and a final. The final is cumulative, although it focuses more on the second half of the class. Both exams will be open-note and taken online through Courseworks. Btw: There is a ton of research in psychology on how to study effectively! [See here](#) for tips.

## Grading Scale

This class uses the following grading scale. Final grades are not rounded (i.e., the threshold for an A is a 93, not a 92.5).

Letter grade:	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Numeric score:	97	93	90	87	83	80	77	73	70	60	<60

## Course Support

### Office Hours

Michelle and I are available to help during office hours every week. Come stop by, whether it's to talk about an assignment, clarify part of a lecture that didn't make sense, discuss careers in psychology or academia, chat about research opportunities in psychology, or just say hi. If your schedule conflicts with our office hours or you need to meet over Zoom instead of in person, email us and we can set up a different time to meet.

Note that attending office hours is both a normal and important part of your time at Barnard. Research in psychology and education has shown that success in college (and beyond) is not just about what you know, but also about the relationships you build and the support network they provide. I want you to succeed, and will do everything I can to facilitate your success – but the only ways I will know that you are having trouble are if you tell me or if you don't do well on an assignment (and I think we would both strongly prefer the former!).

### Accessibility and Inclusion

I value diversity and inclusion, and am committed to a climate of mutual respect and full participation. My goal is to create learning environments that are usable, equitable, inclusive, and welcoming. If there are aspects of the instruction or design of this course that pose barriers to your inclusion, engagement, accurate assessment, or achievement, please let me know as soon as possible. Moreover, if you believe you may encounter barriers in the academic environment due to a documented disability or emerging health challenges, please feel free to contact me and/or the [Center for Accessibility Resources & Disability Services](#) (CARDS). I encourage any student with approved academic accommodations to contact me during office hours or via email. If you have questions regarding registering a disability or receiving accommodations for the semester, please contact CARDS at (212) 854-4634 or [cards@barnard.edu](mailto:cards@barnard.edu). CARDS is located in 101 Altschul Hall. Columbia students can contact the [Office of Disability Services](#) (108A Wien Hall).

### Additional Resources

- [Peer Tutoring](#), [Writing Fellows](#), [Speaking Fellows](#), and [Personal Librarians](#) for help with coursework, developing oral and written communication skills, and conducting background research
- [Primary Care Health Service](#), [Furman Counseling Center](#), and [Health & Wellness](#) (health comes first!)
- [Access Barnard](#): resources for students who identify as international, first-generation, or low-income

## Course Policies

### Attendance

You are expected to attend class **when healthy**. If you feel sick, have any of the symptoms listed in CoVerified (sore throat, coughing, etc.), or have tested positive for COVID-19, you should not physically come to class. You may instead attend class synchronously over Zoom if you are feeling okay, or you can watch the class recording later on Panopto. See the "Lecture Participation Worksheets" section above regarding extensions if you are watching the class recording later.

### Masks

Masks must be worn **over your nose and mouth at all times** during class. N95, KN95, or KF94 masks are strongly encouraged and are available for free upon request in the testing center. If you need to eat, please leave the classroom to do so. If you need to take a sip of water/coffee/etc., you will need to pull down your mask very briefly and replace it in between sips. This is a Barnard policy that we must strictly enforce. Note that Access Barnard can also help with providing masks in the event of financial barriers – please let me know if you would like help connecting to this resource.

### Late Assignments

Work is expected to be turned in on time. However, I am aware that exceptional circumstances and emergencies come up, especially in this rollercoaster of times. **Please inform me before the deadline** if you do not think you will be able to hand in an assignment on time, and we will work something out.

### Class Etiquette

- **Timeliness:** Please arrive on time for class (again, when healthy). Note that you will need to complete your symptom reporting in CoVerified at least 45 minutes before class (by 9:25am) to swipe into the building.
- **Laptops:** Please realize that your classmates can see your laptop screen and may be distracted by your social media, email inbox, etc. Please do not distract your fellow classmates with off-task laptop use.
- **Cell phones:** All phones should be silenced. That means actually silent—not just on vibrate.
- **Ask questions:** If you have questions, stop me to ask them. It's likely that several of your classmates have the same question!

### Academic Integrity

Students are expected to do their own work and abide by Barnard's [Honor Code](#) and [Student Code of Conduct](#) (see also Barnard's [policy on academic integrity in online courses](#)). Academic dishonesty—cheating on exams, plagiarizing, having someone do your work for you, copying others' answers, etc.—will not be tolerated. Anyone caught engaging in these behaviors will be reported to the College. If you have questions about what constitutes cheating, plagiarism, or other violations of academic integrity, please ask. It is important to note that in psychology and science in general, we always build off others' work and ideas; these contributions **must** be appropriately cited. Come talk to me if you have any questions about how to do this.

## Course Schedule

Note that textbook page numbers refer to the book page numbers (printed on the bottom of each page).

#	Date	Class Topic	Read for this class	Due by start of class
1	1/18 T	Introduction	Ch 1	
2	1/20 Th	The research process and ethical considerations	Ch 2 pg 23-27 & 46-56; Ch 3	Pre-class survey
3	1/25 T	Developing research ideas	Ch 2 pg 28-29 & 37-45	
4	1/27 Th	Hands on 1: Literature search and citation management	Ch 2 pg 30-36; Ch 11	
5	2/1 T	Psychological measurement	Ch 4 pg 85-94	
6	2/3 Th	Evaluating measurement	Ch 4 pg 95-109	Hands on 1
7	2/8 T	Observing behavior	Ch 6 pg 170-179	
8	2/10 Th	Hands on 2: Observational coding		
9	2/15 T	Surveying people	Ch 7 pg 183-195	
10	2/17 Th	Hands on 3: Survey creation		Hands on 2
11	2/22 T	Sampling	Ch 7 pg 196-201	
12	2/24 Th	Correlational research	Ch 6 pg 149-157	Hands on 3
13	3/1 T	Multivariate correlational research	Ch 6 pg 158-163	Complete class survey (you + 3)
14	3/3 Th	Hands on 4: Working with data, correlations, and scatterplots	Ch 12; Ch 13 pg 331-338	
15	3/8 T	Review session		
16	3/10 Th	Midterm		
<b>No class – Spring Break</b>				
17	3/22 T	Basics of experimental design	Ch 5 pg 111-120	Hands on 4
18	3/24 Th	Within vs. between-subject experiments	Ch 5 pg 121-127	
19	3/29 T	Internal validity and confounds	Ch 5 pg 128-141	
20	3/31 Th	Hands on 5: Experiments		
21	4/5 T	Experiments in the lab, field, and online		Hands on 5

<b>22</b>	<b>4/7 Th</b>	<b>Hands on 6: Visualizing and analyzing experimental data</b>	Ch 13 pg 339-353	
<b>23</b>	<b>4/12 T</b>	<b>Complex experimental designs</b>	Ch 9	
<b>24</b>	<b>4/14 Th</b>	<b>Hands on 7: Main effects and interactions</b>		<b>Hands on 6</b>
<b>25</b>	<b>4/19 T</b>	<b>Additional research designs and considerations</b>		
<b>26</b>	<b>4/21 Th</b>	<b>Statistical validity and best research practices</b>	Ch 13 pg 354-367	<b>Hands on 7</b>
<b>27</b>	<b>4/26 T</b>	<b>Hands on 8: Evaluating claims</b>	3 Claims, 4 Validities supplemental reading	
<b>28</b>	<b>4/28 Th</b>	<b>Wrap Up</b>		
				<b>Hands on 8 due 5/3 Final exam 5/12</b>

Course syllabus, schedule, and readings are subject to revision. Please note that changes are particularly likely this semester due to the evolving nature of the pandemic. I will communicate any and all changes as quickly as possible via email and in class.