ABOUT PSYC 218

This course will introduce you to the wonderful world of *data*. Information—often in the form of numbers—is all around us. This course will teach you tools for analyzing and interpreting these numbers to answer pressing questions like which of your friends you should recruit to your intramural basketball team, and whether contestants on *The Bachelorette* really are taller than the average guy.

Course prerequisites: Psyc 217 and a declared major in Psychology, Cognitive Systems, or Speech Sciences

THIS IS A WEB-ORIENTED COURSE!!

We offer you the two following options, which you can combine however you like:

Synchronous (for structure)
The instructor will deliver live lectures streamed on Zoom during scheduled class periods; tune in to be able to ask questions, answer polls and engage in discussion.

Asynchronous (for flexibility)
We will post recordings of the lectures on canvas, and there will be no penalty for not attending the live sessions. You will have different opportunities to participate.

YOUR INSTRUCTIONAL TEAM

Instructor:

Dr. Kristin Laurin
klaurin@psych.ubc.ca
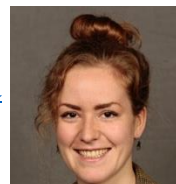Office hour: Fri @2pm

TAs:

Matthew Cooke
mbcooke@mail.ubc.ca
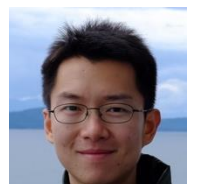Office hour: Wed @ 11am

Meghna Srivastava
meghnasr@mail.ubc.ca
Office hour: Thur @4pm

Holly Engstrom
h.engstrom@psych.ubc.ca
Office hour: Mon @2pm

Enda Tan
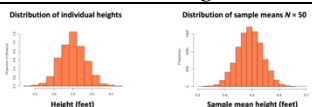enda.tan@psych.ubc.ca
Office hour: Mon @4pm

COMMUNICATION WITH THE TEAM
Note that all office hours are accessible only as Zoom meetings on Canvas

Have a question about the course? If you checked the syllabus and Piazza (the class discussion board), and the answer is not there, you have three options:

1—Post it on Piazza! That's how you'll get the quickest answer.

2—Come to office hours! You have five to pick from for an in-person conversation.

3—LAST RESORT: send an email—you may have to wait a week or so for a response since we'll be focusing on monitoring Piazza and providing office hours.

Learning goals. After this course you should be able to:

Distinguish different ways of measuring variables and be able to compute different metrics of central tendency and variability	*What are ways we might measure the height of contestants on The Bachelorette, what is the "typical" contestant's height, and as a group, how varied is their height?*
Understand the construction of graphs like frequency distributions, binomial distributions, and sampling distributions	
Understand what a normal distribution is, and how to use it to calculate the probability of ranges of outcomes.	*How likely is it that if we randomly select one North American man, he will be between 6'2" and 6'5"?*
Recognize graphs and be able to calculate linear relationships between two variables as well as use those linear relationships to predict values on either variable.	*Do taller men tend to earn more money than shorter men? (they do—but they also die younger.) How would we quantify that relationship? If we know a particular man's height, what is our best guess about his income?*
Understand principles of probability, and how to calculate the probability of certain combinations of events.	*What is the probability that any given contestant on the Bachelorette is born in March* and/or *makes a proposal that the bachelorette accepts?*
Formulate appropriate null and alternative hypotheses, and use inferential statistics to test them.	*Are contestants on the Bachelorette taller than the average North American man? Are their incomes higher? How confident are we about our estimate for the average contestant's height?*
Understand the concept of statistical power and its application to interpreting inferential statistics.	*My statistical test said I can*not *conclude that the Bachelorette contestants are taller than the average North American man! Could that result be false? How could that have happened, I thought numbers never lied!*

Learning assessments. To make sure you have achieved the learning goals we will use:

Assessment	Value	What is it?	When?
Participation	3 pts	Top Hat in-lecture questions. If Top Hat does not suit you, you will have a chance to provide evidence of your consistent and valuable participation on Piazza	Consistently throughout the term
Assignments (6)	24 pts	These will give you practical experience analyzing data	Due Mondays 9am
Midterm quizzes (3)	36 pts	NOT cumulative	On Mondays
Final exam	34 pts	Cumulative, with emphasis on material that followed the third midterm quiz	During exam period Apr 18-29
REC	3 pts	Note that these are required points, not bonus points	Do them early!!

Quizzes and final will cover lecture *and* textbook; **you are responsible for all this material, whether or not we discuss it in class!**

1. **Participation:** Every lecture, there will be opportunities to test your learning through Top Hat questions. If you answer at least 80% of these questions across all lectures, you will earn the full 3%. *What if I don't do Top Hat participation?* You can earn participation points by *consistently* contributing to Piazza. Near the end of the term, I will send out your Top Hat participation points, and if you like, you'll have a chance to prove instead that you *consistently* (i.e., throughout the term) made valuable posts to Piazza.

2. **Assignments:** These will give you practical experience analyzing and interpreting data using SPSS. See the Course Schedule at the end of the syllabus for specific dates and deadlines. Each lab assignment consists of two components:

a. **CogLab or Survey:** These are online experiments or surveys that the class will do to generate data for the assignments. If you do not complete this component for any assignment, you will lose 1 of the 4 points that assignment is worth. Coglabs are also due on Mondays.
What if I miss a CogLab or Survey? **You will lose 1 point on your assignment.**

b. **Assignment:** You will analyze and draw conclusions about the class' data. Your TAs will post video tutorials to explain the relevant SPSS functions. Feel free to meet with your TAs during their office hours, and to talk to your classmates, about issues you encounter while completing the assignments. **However, you must complete the analyses and write-ups on your own. Share your work with other students or using another student's work will result in a score of 0.**
What if I miss an assignment? You have TWO 1-Day-Late Passes. Use them both on 1 assignment, one for each of 2 assignments). Once you've used your passes, 10% per day deductions will apply.

3. **Midterm quizzes:** These will contain multiple choice questions and computation questions. You will upload photos of your written work to Canvas following the exam; if you do not have access to the technology required for that, talk to the instructor or a TA.
What if I miss a quiz? Its points will be redistributed to future quizzes and the final, **no questions asked**.

4. **Final exam:** The final exam is *cumulative*, with an emphasis on material from Chapters 13-15 of the textbook. You are required to be write the final exam at the scheduled time; if you have three or more final exams scheduled to start and finish within a 24-hour period, you may request to write the second exam on a different day. Make this request to me at least one month before the exam.
What if I miss the final? You or your caregiver must contact your Faculty's Advising office to apply for Academic Concession.

5. **Research Experience Component:** Most students will choose to earn their REC by participating in psychology studies (worth 1% for each hour) through the Department of Psychology's Human Subject Pool (HSP) system. You can create an account, locate studies and sign up for them at https://ubc-psych.sona-systems.com/. If you prefer, you can earn these same extra credits by completing a library-writing project, in which you read and summarize a peer-reviewed research article. You can find out more about how you can earn extra credits at https://psych.ubc.ca/hsp. There you will find a detailed guide about how to participate in the HSP, how-to videos, and a list of frequently asked questions.
What if I don't do my full three hours / library assignments? **You will lose the points.** I urge you to sign up for and complete studies early in the term.

Required Materials
1. Pagano, R. (2012). *Understanding Statistics in the Behavioral Sciences* (10th Edition). Available at the UBC bookstore as an e-book or here as a loose-leaf copy. Or you can rent an e-book version of this textbook (go to www.vitalsource.com and enter ISBN 1111837260).
2. Francis, G., and Neath, I. (2007). *CogLab Online Version 5.0 With Access Code* (5th Edition). You can purchase an access code from the bookstore, or one will come with the loose-leaf copy of Pagano. **Once you have an access code**, you are ready to register for CogLab by following the instructions on the course website under "Modules—General Resources."
3. Cuttler, C. (2014). *A Student Guide to SPSS*. (3rd Edition). Available at the UBC bookstore as a hard copy, or here as an e-book.
4. SPSS software: Free for UBC students. Click here and follow the instructions under "**Students**".
5. Respondus Lockdown Browser for quizzes and final. Click here to get the latest version.
6. Top Hat account. Register at: https://app.tophat.com/register/student/ with join code 584504; we'll use it right away. Use your real name to register, or else we can't mark you!
7. Piazza account: You'll need this to communicate and participate; click here to sign up, or find it through Canvas.

8. Scientific calculator. You will need a basic scientific calculator (one with inverse and square root functions will be sufficient and should cost about $15 or less) for exams.

Additional notes

- Your grade for each exam and assignment will be posted on Canvas. The Department of Psychology reserves the right to scale grades in order to maintain equity among sections and conformity to departmental norms. Students should therefore note that an unofficial grade given by an instructor might be changed by the department. Grades are not official until they appear on a student's academic record. The Department of Psychology has adopted the following target grade distributions in 100- and 200-level courses, and reserves the right to adjust final grades in this course if the distribution deviates substantially from the target. **However, in the spirit of flexibility and compassion in light of COVID-19 and the associated pivoting to online teaching, those departmental norms have been adjusted upward by 5% this term.**

Class Performance	Mean	Standard deviation
Strong	72%	13%
Average	70%	13%
Weak	68%	13%

- If you wish to withdraw from this course without a record of it on your transcript, you must do so by Jan22nd.

- Similar to the broader UBC community, the Psychology Department—and this class—seeks to build a community where students feel included and are treated equitably. This class aims to be inclusive of gender identity, gender expression, sex, race, ethnicity, socioeconomic background, sexual orientation, political and religious affiliation, ability, health, and age (this is not an exhaustive list!). If controversial sensitive issues arise, respectful and productive discussion is encouraged, and students should feel safe to explore ideas without fear of being judged. Our goal is not to always agree, but rather to disagree without threatening or alienating. However, if a statement or behaviour is likely to offend others or make them feel alienated in any way, it should not be shared with the class (but can be discussed during office hours). If you ever feel offended, threatened, or alienated by anything that happens in class, please feel welcome to let a member of the instructional team know.

- **We are still in the middle of a pandemic!** This is affecting all of us in so many different ways. Your instructional team has done our best to adapt the course so it offers structure as well as flexibility. But if you need further flexibility or support for any reason, *please reach out!!*

UBC also has a variety of resources to help support students. These include:
⇒ Learning through online classes, UBC's COVID-19 health guidance, and managing mental health during the pandemic
⇒ Accommodating students with disabilities (physical, mental, or learning) or chronic health conditions: Centre for Accessibility

Statement on Academic Integrity
In the Department of Psychology, and with the UBC and scholarly communities at large, we share an understanding of the ethical ways in which knowledge is produced. A core practice of this shared value of academic integrity is that we acknowledge the contributions of others to our own work. It also means that we produce our own contributions that add to the scholarly conversation. We don't buy or copy papers or exams, or have someone else edit them. We also don't falsify data or sources, or hand in the same work in more than one course. Because it is so important that research be done ethically, we expect students to meet these expectations. Any instance of cheating or taking credit for someone else's work, whether intentionally or unintentionally, can and often will result in receiving at minimum grade of zero for the assignment, and these cases will be reported to the Department Head, and the Faculty of Arts Associate Dean, Academic. According to the University Act (section 61), the President of UBC has the right to impose harsher penalties including (but not limited to) a failing grade for the course, suspension from the University, cancellation of scholarships, or a notation added to the student's transcript. See the UBC Calendar entries on "Academic Honesty," "Academic Misconduct," and "Disciplinary Measures," and the Student Declaration and Responsibility. See "Tips for Avoiding Plagiarism" from the Chapman Learning Commons, and bookmark the OWL website for how to use APA citation style.

WELLNESS RESOURCES

Below you will find a list of resources you may want to us if you are struggling in any way to manage your school responsibilities or the stresses of life in general.

Student Health Services:
https://students.ubc.ca/health/student-health-service
604- 822-7011
Student health provides students with a variety of healthcare related services to help you maintain your health while studying. Access to doctors and registered nurses.

Counselling Services:
https://students.ubc.ca/health/counselling-services
Phone number: 604-822-3811
Counselling services offers a variety of resources to help you maintain your mental health while in school. You may see a counsellor on an individual basis, attend group counselling, or to document an illness if you require academic concession.

Centre for Accessibility (Access & Diversity):
https://students.ubc.ca/about-student-services/centre-for-accessibility
604-822-5844
CFA provides accommodations for students living with physical or mental disabilities.

BC Crisis Center:
https://crisiscentre.bc.ca/
Phone number: 604-872-3311
Non-profit, volunteer-driven organization that provides emotional support to youth, adults, and seniors in crisis in BC. Crisis line available 24/7.

Distress Line:
Phone number: 1-800-Suicide (784-2433)
If you are in distress or are worried about someone in distress who may hurt themselves, call 1-800-SUICIDE 24 hours a day to connect to a BC crisis line, without a wait or busy signal.

UBC Sexual Violence Prevention & Reporting Office
https://svpro.ubc.ca/
604-822-1588
A safe place for students, faculty, staff who have experienced sexual violence, regardless of where or when it took place. This includes any attempt or act of a sexual nature without consent. All gender identities, expressions and sexualities are welcome.

SASC
https://www.ams.ubc.ca/student-services/sasc/
604-822-2101
The AMS Sexual Assault Support Centre is here to educate, support, and empower people of all genders who have experienced sexual violence as well as their friends and family.

SpeakEasy:
https://www.ams.ubc.ca/student-services/speakeasy/
Phone number: 604-822-9246
A student run service that offers confidential support for students experiencing crisis. Also a good resource for additional information and referrals within the UBC community.

UBC Wellness Centre:
https://students.ubc.ca/health/wellness-centre
Phone number: 604-822-8450
Speak with other students about tips for managing stress, keeping healthy sleep and eating patterns, concerns about safe sex and more.

Mood Disorders Clinic UBC:
http://ubc-mooddisorders.vch.ca/
A psychiatric program designed specifically to treat individuals living with depression or bipolar disorder.

Health & Wellbeing:
https://students.ubc.ca/health
This website is a resource hub that provides students with information to help improve physical and mental wellbeing.

Mental Health Awareness Club:
http://blogs.ubc.ca/ubcmhac/
A club that offers opportunities to speak about mental health with others and strives to promote mental health awareness throughout the UBC community.

Pacific Spirit Community Health Centre:
3rd Floor, 2110 West 43rd Ave Vancouver B.C. V6M 2E1
Phone number: 604-267-3970
A free and confidential services for youth and young adults up to the age of 24. Services include Adult Counselling, access to an Addiction Physician - including usage of a methadone maintenance program - and a Drug Education Series.

AMS Food Bank:
https://www.ams.ubc.ca/student-services/food-bank/
If you are in a financial emergency AMS food bank can provide you with a food hamper. You are able to use the service up to 6 times each term.

UBC Psychology Clinic:
https://clinic.psych.ubc.ca/
Professional psychological services provided to the community, including assessment & treatment for children, adults & families by clinical psychology trainees.

The Kaleidoscope: http://the-kaleidoscope.com/
A confidential peer-run mental health support group that takes place on campus 2-3 times a week. You may attend the group if you are experiencing any kind of mental health related challenges, or if you're just feeling stressed about school in general.

COURSE SCHEDULE

Any changes to this schedule will be announced during lecture and on the course website.

Week	Date	In-class topic	Pagano reading		Cog lab or assignment due @9am?	Quiz?
1	Jan 11-15	Intro, measurement basics, frequency distributions	Ch. 1-3	M		
				W		
				F		
2	Jan 18-22	Percentiles, central tendency, variability	Ch 4	M	"Stroop"	
				W		
				F		
3	Jan 25-29	z-scores, catch-up / review	Ch 5	M	"Memory span"	
				W		
				F		
4	Feb 1-5	Correlation	Ch 6	M	Qualtrics survey	Quiz 1
				W		
				F		
5	Feb 8-12	Linear regression, sampling	Ch 7 & 8	M	A1	
				W		
				F		
	Feb 15-19	Reading break				
6	Feb 22-26	Probability, catch-up / review	Ch 8	M	A 2+3	
				W		
				F		
7	Mar 1-5	Binomial distribution	Ch 9	M		Quiz 2
				W		
				F		
8	Mar 8-12	Hypothesis testing, sign test, sampling distributions	Ch 10 & 12	M	"Change detection"	
				W		
				F		
9	Mar 15-19	z-test, power, catch-up / review		M	"False memory"	
				W		
				F		
10	Mar 22-26	Single-sample t-test, effect sizes	Ch 13	M	"Risky decisions"	Quiz 3
				W		
				F		
11	Mar 29-Apr 2	Confidence intervals	Ch 13	M	A4	
				W		
				F		
12	Apr 5-9	Two-sample t-tests	Ch 14	M	A5	
				W		
				F		
13	Apr 12-14	One-way ANOVA	Ch 15	M		
				W	A6 due April 19	

Final exam during exam period, Apr 18-29.