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ANALYSIS OF BEHAVIOURAL DATA

What is this Course About?

Fundamentally, this course is about understanding people. How are we going to do that? In a way you might not have explored much before: by learning about statistics. Statistics are, quite simply, tools that researchers in psychology (and other disciplines) use to gain insight into how and why people do what they do. No more, no less. Statistics aren't magic. They don't tell us exactly what's going on (but they can give us insight, as long as our interpretations are correct). And statistics are certainly not something to be feared. Yes, there are calculations and calculators and computers involved. But those are just about getting the numbers. What's really important is how we interpret them, so that we can evaluate hypotheses and learn things about people.

Keep in mind that this course is an *introduction* to statistics. We're not going to master everything about statistics. Sometimes the ideas we'll be learning about might not seem relevant to understanding behaviour, but they're laying a foundation that you can take with you into the world and into future courses. For many people, this course will present quite a challenge. Prepare to put in the work, don't fall behind, seek help when you need it, and you'll find yourself off and running toward developing statistical literacy and understanding people a bit better. You might even learn something about yourself in the process!

Quick Facts: Where? When?

Classes are held **Monday, Wednesday, Friday, 12:00 to 12:50 in AERL Room 120**. Attendance is expected and is necessary for success. Please show respect for your fellow learners and leaders, including arriving on time and leaving after dismissal. Bring your i>clicker/REEF-ready device, paper and writing tools. You may choose to bring a computer, but beware of its tendency to side-track attention and decrease comprehension – yours and others (Fried, 2008; Sana, Weston, & Cepeda, 2013).

INTEGRATION OF COURSE IN CURRICULUM This course requires successful completion of Psyc 217 Research Methods and declaring a major in Psychology, Cognitive Systems, or Speech Sciences. It is a requirement for the BA Psychology major, and is a prerequisite for Honours and Psyc 359 (advanced statistics).

A NOTE ON WITHDRAWING This is an intense course. If you find yourself unable to handle the demand at this time, I encourage you to talk to me. Withdrawal from this course without record of the course on your transcript must occur before **18 January 2016**, or before **15 February 2016** for withdrawal with a standing of "W" on your transcript.

Meet your Leaders in Learning

INSTRUCTOR Dr. Catherine Rawn

Office: Kenny 2523

Welcome to my drop-in office hours:

Tues 2-3, Wed 1-2, Fri 3-4

Appointments can be made if necessary.

Email: cdrawn@psych.ubc.ca **All general questions should be posted on Piazza** so everyone can help each other quickly. If you need to email me directly, please put "Psyc 218" in the Subject line and use your [UBC email account](#) or your message could get misdirected. I try to respond as quickly as possible, but 48 hours for a reply (excluding evenings and weekends) is about typical.

Web: www.psych.ubc.ca/~cdrawn, Twitter: @cdrawn

Dr. Rawn in ≤ 20 words: Ontario-born; vegetarian; happily married; half-marathon runner; studied self-control; enjoys chocolate, coffee, wine, Vancouver, a good challenge; dislikes horror movies, cheating.



TEACHING FELLOWS

Troy McDiarmid, Email: tmcdiarmid@psych.ubc.ca

Office: Kenny 3525; Office hour: **TBD**

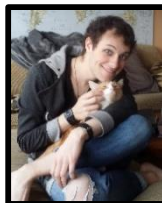
Troy in ≤ 25 words: Born and raised in the Ottawa Valley; studies the genetics of Autism Spectrum Disorder, loves skateboarding, hiking, the ocean, bagels, schedules, and excessive caffeine.



Cermet Ream, Email: cermet@psych.ubc.ca

Office: Kenny 2202; Office hour: Thursdays 1-2

Cermet in ≤ 25 words: Transitioning genders (singular they pronouns); Michigan born, Chicago raised; vegan; studies genetic essentialism, meaning, machine learning; likes eyeliner, punk, cute animals.



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Learning Goals: Where are We Going?



I designed this course with specific goals in mind to keep all of us focused throughout the term. By the end of this course, you should be able to...

1. Compare and contrast descriptive statistics, inferential statistics, and the *New Statistics*.
2. Calculate, by hand and using computer software, a variety of statistics commonly used in psychology (e.g., correlation, regression, z-scores, t-tests).
3. Choose and apply the appropriate statistic to analyze a dataset, when provided with a study's design and a researcher's purpose.
4. Interpret what the statistics you calculate mean about the data and the hypothesis.
5. Evaluate others' interpretations of statistical analyses.
6. Explain and execute the process of a hypothesis test.
7. Explain the (limited!) meaning of "statistical significance."
8. Discuss the strengths and weaknesses of various statistical tests, and the NHST framework broadly.
9. Define and discuss the relationships among major statistical concepts (e.g., alpha, effect size, power, sample size).
10. Appreciate the value of developing statistical literacy.

Materials: What Do You Need?

You'll need 6 materials to set yourself up for success.

1. REQUIRED TEXTBOOK Pagano, R. (2013). *Understanding Statistics in the Behavioral Sciences, (10th Ed.)*. Nelson Canada. The looseleaf version that we are using this year contains the same content as the hardback 10th edition (so it is also fine if you get a used copy of the hardback 10th edition). The 9th edition of the text is somewhat but not majorly different from the 10th edition. You are responsible for the 10th edition material. Use the 9th at your own risk.

2. REQUIRED LAB GUIDE Cuttler, C. (2014). *A student guide to SPSS (2nd Edition), including download code for SPSS Student Version 22*. This guide is available to purchase as an ebook from <http://www.kendallhunt.com/cuttler/> or in physical form at the bookstore. Note: the older edition will not be helpful as it refers to an older edition of the SPSS software.

The Cuttler lab guide will be indispensable when it comes to completing the assignments throughout this course. Install SPSS on your computer ASAP as some students have had problems installing it in the past. If you choose to access SPSS some other way and/or in some other version, *do not expect us to be able to help you with it*.

3. REQUIRED BASIC CALCULATOR Bring a basic, non-programmable calculator to every class and to all exams. It should be able to do squares and square roots; that's the fanciest calculation ability you'll need (e.g., simple Casio is \$9.95 at Staples.)

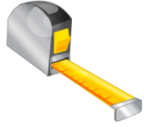
4. CONNECT COURSE WEBSITE www.connect.ubc.ca. Keep organized here. Find learning objectives before and PowerPoint slides after class, announcements, forms, your grades, **and links and instructions for all other websites**. Log in often using your CWL.

5. REQUIRED COGLAB 5.0 ACCESS An access code for CogLab 5.0 is available for a specially-negotiated rate of \$24.95. You can access it in one of two ways: an access code from the bookstore packaged with your Pagano text, or you can purchase access directly from the website www.nelsonbrain.com/shop/micro/ubc/psyc218. To register in our course on CogLab, please follow the instructions on Connect, using the same first and last name as your official UBC registration.

6. REEF Communicate and engage during class using REEF polling by i>clicker. Use any mobile device with the REEF app, a web browser, or a registered physical i>clicker to respond to questions and polls in every class. If you purchased a TopHat subscription in my class last term, or have serious financial need, please see me for a free access code. Otherwise, access will cost about \$10.

7. PIAZZA Communicate and engage outside of class using Piazza. The system is catered to getting you help fast and efficiently from classmates, the TA, and myself. Rather than emailing questions to the teaching staff, I encourage you to post your questions on Piazza. It's free.

SHORT ON CASH? If you're choosing between buying food or textbook, study guide, and REEF, *please* come see me. I have a few access codes available for people experiencing financial hardship. Note that you can also borrow a copy of the text on course reserve from Koerner library. Let me know if that's not so. SPSS is available on computers in BUCH B101 and B121, which are drop-in labs open weekdays from 8am to 10pm (doors unlocked only until 6pm). Please check the room schedules in case a class has booked the space.



Learning Appraisals: How Will We Know If We Have Met Our Goals?

Learning Appraisal Activity	Points to Earn	Dates
3 Exams (12% x 3)	36%	Fridays January 22 (Chapters 1-5, <i>New Statistics</i> pp. 1-5), February 12 (Chapters 6-8), March 11 (Chapters 9-12, ideas from <i>New Statistics</i> pp. 17-19)
Cumulative Final Exam	34%	During exam period (April 12-30) as scheduled by registrar
Assignments (4% x 6)	24%	Due at the start of class on Wednesdays January 20, February 3, February 24, March 9, March 23, and Friday April 8
In class participation (REEF)	3%	Continuous
Research Experience Component (3 hours HSP)	3%	Complete by Friday April 8
Points Available for you to Earn	100%	

MIDTERM EXAMS (3 x 12%) AND CUMULATIVE FINAL EXAM (34%) All exams will consist of a mix of multiple-choice and short answer questions. **You will be challenged to push beyond memorization of facts and to integrate and apply course material.** Research shows greater long term retention with multiple testing—not just studying—opportunities (Roediger & Karpicke, 2006). Therefore, to best prepare you to apply course material in future related courses, **the final exam is cumulative.**

PRESENCE AT MIDTERM EXAMS Presence at all midterm tests is expected. **THERE WILL BE NO MAKE-UP MIDTERMS.** If you miss a *midterm test* for any reason, your final exam will be worth 12% more (i.e., 46% of your grade). If you miss a second midterm test, your final exam will be worth 24% more (i.e., 58%), and so on.

PRESENCE AT FINAL EXAM Presence at the Final Exam is **mandatory**. If you absolutely must miss the final exam due to an extenuating circumstance like severe illness, you or your caregiver must apply for Academic Concession by contacting your Faculty’s Advising Office (e.g., Arts Advising through the Centre for Arts Student Services). If you have 3 or more exams scheduled to start and finish within a 24 hour period you may request to write the second exam on a different day. However, you must give the instructor of the second exam one month notice.

ASSIGNMENTS (6 x 4%) Six lab assignments spread across the term will give you practical experience analyzing data using SPSS (a commonly used statistical software package) and reporting the results. Each lab assignment has three components. Consult the Course Schedule on the last page of this syllabus for dates. It is possible these dates could change. You are responsible for coming to class and finding out about any changes.

(1) CogLab or Survey. You will be asked to spend 10-30 minutes competing an online experiment or survey. This step will allow us to generate a dataset the class will use for the assignment, and will help you develop a deeper understanding of data analysis and interpretation because you have experienced the study as a participant. *These are always due on Fridays at the start of class. Check the Course Schedule for specific dates.*

You will lose ¼ (25%) of your assignment grade (i.e., 1% of your final course grade) for each CogLab or Survey you do not complete by the due date and time. You will not be able to make up lost marks because of failure to complete a component on time.

For links to the CogLab experiments and survey, please see the folder called “Assignments” in Connect.

(2) Student Guide to SPSS and In-Class Demonstration. It is vital to read the appropriate chapter(s) for each lab assignment in *Cuttler’s A Student Guide to SPSS (2nd edition)*. The appropriate chapters will be announced on Connect and in class. These chapters provide detailed information about how to perform all the SPSS functions you will need for the lab assignments, including screen shots from SPSS. One of our Teaching Fellows will come to class to provide a brief demonstration of some of the functions of SPSS required for each lab assignment.

(3) Lab Assignment. After each in-class SPSS demonstration, I will post a lab assignment for you to complete on your own time. All assignments will be posted in a folder called “Assignments” on Connect. The assignments will require you to analyze and interpret the data from one of the CogLab or Surveys our class has generated. You will have about one week to complete each assignment. *These are always due on Wednesdays at the start of class. Check the Course Schedule for specific dates.*

You will lose 1/8 (12.5%) of your assignment grade (i.e., 0.5% of your final course grade) for each day your assignment is late. Late assignments will not be accepted after 7 days.

Lab assignments must be completed independently. You are encouraged to meet with your Teaching Fellows during their office hours if you require assistants with the assignments. You may also use the discussion boards on Connect to discuss with your Teaching Fellows and peers any issues you encounter while completing the assignments. Although you may ask for assistance, *you must complete the analyses and write-ups on your own. You may not share your work with other students or use another student’s work.*

Learning Appraisals, Continued

PARTICIPATION (3%) Your participation will be evaluated in class by responding to REEF questions and outside of class by discussion on Piazza. At the end of the course, all points you earned in REEF for just answering questions (participation) and getting them correct will be added together. In each class period, earn a maximum of two marks by answering at least 75% of the questions (1 mark) and any one of those correctly (1 mark). To earn 3% toward your course grade, earn full marks for at least 90% of the classes during the term. Outside of class, meaningful engagement on Piazza will also be considered.

RESEARCH EXPERIENCE COMPONENT (3%) As part of this course, you will be asked to spend **three hours participating in psychology studies** through the Department of Psychology's Human Subject Pool (HSP) system. The REC is designed to help you learn more about psychology and how research is conducted by providing you with first-hand experience with psychological research. As **an alternative to participation in subject pool studies you may choose to fulfill the required REC by completing three library writing projects**, for which you read and summarize a research article; each article summary counts as one hour of research participation. Study sign-ups and details about the alternative assignment are posted on <http://psych.ubc.ca/internal/human-subject-pool/>. **The REC is worth 3% of your course grade: 1 hour of participation or 1 article summary = 1% x 3.**

Expectations and Course Policies



What We Expect from You

ATTEND CLASS Please come to every class prepared to participate in your learning. Bring your i-clicker/REEF-ready device, paper and writing tools (in addition to a laptop, if you choose to bring one), and an open mind. *If you must miss class* you are responsible for obtaining missed notes and important announcements. You will not be able to regain participation points for missed classes.

PARTICIPATE Success in this class depends upon your active participation. **I will ask you to do only those activities that I believe will help you learn.** Class time is designed to mix lecture-based explanations of course material with demonstrations, pair and small group discussions, large group discussions, writing, REEF questions, and feedback. Come ready.

TREAT OTHERS RESPECTFULLY You are expected to treat all your classmates, the teaching team, and yourself with respect at all times, both in and out of the classroom, face-to-face and in

writing (e.g., on email). This includes arriving to class on time and minimizing distractions for other students.

ACT ETHICALLY You are responsible for your own learning. Cheating of any kind will **not** be tolerated, including dishonest use of REEF (e.g., entering responses for an absent classmate) and copying other's work. See the syllabus section on *Ethical Conduct* for more information.

SHARE CONSTRUCTIVE FEEDBACK We invite you to share your ideas and suggestions with us, particularly about things we are able to change, and be open to working together to make this course a positive experience for all of us.

USE ELECTRONICS IN THE CLASSROOM RESPONSIBLY You may choose to use electronic devices to support your learning—not distract from it. Part of the room will be designated a “laptop-free zone” for people who wish to remain distraction-free during class.

What You Can Expect from Us

BE AVAILABLE We are here to help you in your choice to succeed. Visiting us in person is typically more effective than email for clearing up questions. If office hours absolutely cannot work for you, respectfully email us a few time and day options to make an appointment. Because of our class size, there may be limits on the number of appointments possible.

POST SOME MATERIALS ONLINE PowerPoint slides and handouts will be available *after* class on our course Connect site. Learning Objectives will be available there before class.

CONSIDER RE-GRADE REQUESTS If you feel very strongly that any exam question was graded unfairly, please submit the **Re-Grade Request Form** available on Connect. You must submit the form within 2 weeks of the date grades were made available on Connect. I will consider your request carefully and will respond via email in approximately one week of receiving it. Re-grading may result in an increase or decrease. That re-grade is final.

PROVIDE FEEDBACK We will endeavour to provide you with feedback on learning appraisals as promptly and as with as much detail as possible, given the size of our class.

ACT RESPECTFULLY & ETHICALLY At all times, we aim to treat each of you with respect, and to make all course decisions with the highest standard of ethics in mind. If you feel you are being treated unfairly or disrespected by us or a classmate, we invite you to talk to us so we can sort out the issue together. To be clear: such a discussion would not impact your grade.

Tips for Success: Choosing to Learn!

I believe you can master this course material, *if you consistently choose to put in the effort required to do so*. Here's a rough guideline for how much time you should be spending on this course this year: **3-5 hours out of class for every 1 hour in class**. Note that some people will need more time than this.

What can you do *in class*?

- **Take notes** about what's being discussed, using what's on the slides to guide and organize your notes. (Don't just copy down what you see on the slides; you'll get those words later!).
- **Keep focused**. For example, avoid bringing a computer (or sitting behind someone else's) if it will be a distraction for you. Get adequate sleep and nutrition.
- **Actively participate in activities, demonstrations, and discussions; thoughtfully answer TopHat questions**. The point of all of these is to help you think about the material so you can master it and make it meaningful for your life.
- **Ask questions**. Be brave! If you would like clarification or are interested in how a concept connects or applies in some way... ask it!

What can you do during those 9-15 hours per week you spend on this course *outside class*?

Complete Lab Assignments. It might feel like labs are an extra task, but completing them *is studying!* You will need to link concepts together and apply them to real examples. You will need to calculate and explain and interpret the results you find using our course material. What could be a better way to study?

- **Add to your class notes**. Fill in any missing gaps before you forget! Integrate your notes with the slides posted online (www.connect.ubc.ca). *Build your notes so you can use them to study later.*
- **Come to office hours and post questions on Piazza**. Get to know your Leaders in Learning, ask questions about course material, and find out more about psychology and statistics.
- **Prepare for the next deadline**. There are many components and deadlines to track. Stay organized and plan ahead to set yourself up for success.
- **Actively read the text**. For example, convert section headers into questions to help you identify the most important points to write. Take every chance to test yourself (Bjork & Bjork, 2011). For example, complete "Practice Problems," "Questions and Problems," and quiz yourself on the "Important New Terms." After each chapter, close your book and freely recall everything you can remember, then go back and check what you got and what you missed (Karpicke & Blunt, 2011). *Build your notes so you can use them to study later.*

- **Test yourself using learning objectives from class and the text**. What should you be able to do with the course material? Learning objectives are meant to help you answer this question so you can study more effectively.

Learning Tools to Investigate



I encourage you to take responsibility for your learning and check out what these resources have to offer.

TIME MANAGEMENT Search online for productivity and project management tools and apps (e.g., <https://trello.com>, <https://www.rescuetime.com/>, <https://todoist.com>). Give yourself enough time for papers with <http://assignmentcalculator.library.ubc.ca>, and master many other aspects of academic life <http://learningcommons.ubc.ca/student-toolkits/>

UBC ACADEMIC REGULATIONS Information about academic regulations, course withdrawal dates and credits can be found in the [University Calendar](#).

LEARNING COMMONS is UBC's online hub for study and research support. This interactive website provides you with a wealth of academic resources, from tutoring and workshops to study groups and online technology tools. It also offers plenty of information on a variety of academic topics, and links to nearly all of the academic resources offered at UBC. Make the Learning Commons your first stop for all things academic! <http://learningcommons.ubc.ca>

PHYSICAL OR LEARNING DISABILITIES UBC is committed to equal opportunity in education for all students and so are we! If you have a documented disability that affects your learning in the classroom or your performance on tests or exams, please **contact Access & Diversity** in Brock Hall 1203, 1874 East Mall, Contact: 604.822.5844, www.students.ubc.ca/access. **If your disability requires extra exam time, meet with Dr. Rawn as soon as possible to discuss accommodation options for the two-stage exams.**

TUTORS Some students who have done well in this course in the past are serving as tutors for hire. More information will be available in the first few weeks of class.

Psychology Department Grading Policies

To meet department policy, the typical student demonstrating adequate performance on learning appraisals will earn around 63-67% in this course.

Read on for details.

In order to reduce grade inflation and maintain equity across multiple course sections, all psychology courses are required to comply with departmental norms regarding grade distributions. According to departmental norms, the average grade in a 100- and 200-level Psychology courses are 67 for an exceptionally strong class, 65 for an average class, and 63 for a weak class, with a standard deviation of 14. The corresponding figures for 300- and 400-level classes are 70, 68, and 66, with a standard deviation of 13. **Scaling** may be used in order to comply with these norms; grades may be scaled up or down as necessary by the professor or department. Grades are not official until they appear on a student's academic record. You will receive both a percent and a letter grade for this course. At UBC, they convert according to the key below:

A+	90-100%	C+	64-67%
A	85-89%	C	60-63%
A-	80-84%	C-	55-59%
B+	76-79%	D	50-54%
B	72-75%	F	0-49%
B-	68-71%		



Faculty of Arts Guidelines for Grading Criteria

You are earning a degree at a highly reputable post-secondary institution. Therefore, criteria for success are high. The Faculty of Arts offers the following guidelines (also available on [this](#) website) that broadly characterize the kind of work that is generally associated with the main grade ranges. These characteristics help to put the Psychology Department Grading Policies into context. Note that adequate performance is in the C range, which is the typical class average.

A RANGE: Exceptional Performance. Strong evidence of original thinking; good organization in written work; capacity to analyze (i.e., break ideas down) and to synthesize (i.e., bring different ideas together in a coherent way); superior grasp of subject matter with sound critical evaluations; evidence of extensive knowledge base.

B RANGE: Competent Performance. Evidence of grasp of subject matter; some evidence of critical capacity and analytic ability; reasonable understanding of relevant issues; evidence of familiarity with the literature.

D-C RANGE: Adequate Performance. Understanding of the subject matter; ability to develop solutions to simple problems in the material; acceptable but uninspired work; not seriously faulty but lacking style and vigour.

F RANGE: Inadequate Performance. Little or no evidence of understanding of the subject matter; weakness in critical and analytical skills; limited or irrelevant use of the literature.

Consider these characteristics when making choices about the quality of work you submit in all learning appraisals, in this and any other course.

Ethical Conduct: Practices and Policies

Don't Cheat. Don't Plagiarize. It's Not Worth It.

Read on For Key Definitions, Consequences, and Ways to Act Ethically

The consequences for unethical conduct are more severe than you may think: you may fail the assignment or test, you may fail the course, you may be expelled from University, and unable to attend any other post-secondary institution in the future. Think about the long-term implications of that outcome in your life.

Psychology Department's Position on Academic Misconduct

Cheating, plagiarism, and other forms of academic misconduct are very serious concerns of the University, and the Department of Psychology has taken steps to alleviate them. In the first place, the Department has implemented software that can reliably detect cheating on multiple-choice exams by analyzing the patterns of students' responses. In addition, the Department subscribes to *TurnItIn* — a service designed to detect and deter plagiarism. All materials (term papers, lab reports, etc.) that students submit for grading will be compared to over 5 billion pages of content located on the Internet or in TurnItIn's own proprietary databases. The results of these comparisons are compiled into customized "Originality Reports" containing several, sensitive measures of originality that flag instances of matching text suggesting possible plagiarism; instructors receive copies of these reports for every student in their classes.

During exams, the instructor and invigilators reserve the right to move students in their seating arrangement with no explanation provided.

In all cases of suspected academic misconduct, the parties involved will be pursued to the fullest extent dictated by the guidelines of the University. Strong evidence of cheating or plagiarism may result in a zero credit for the work in question. 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 a student's transcript. For details on pertinent University policies and procedures, please see Chapter 5 in the UBC Calendar (<http://students.ubc.ca/calendar>).

Why is Academic Misconduct Treated So Harshly?

Some people don't feel like cheating on a test or taking a sentence or two from someone else's paper without citing it is a big deal. Here's a bit of insight into why we care so much.

In the academic community—a community of which you are now a part—**we deal in ideas**. That's our currency, our way of advancing knowledge. By representing others' ideas in an honest way, we are (1) respecting the rules of this academic community, and (2) showcasing how our own novel ideas are distinct from but relate to their ideas. APA style gives us a formal way to indicate where our ideas end and where others' begin. **Welcome to the academic community. You are expected to act honestly and ethically, just like the rest of us.**

Participating in the Academic Community Ethically

What can you do to ensure you are acting ethically in this course? **First, recognize that all graded work in this course, unless otherwise specified, is to be original work done independently by individuals.** Although you can seek help from your TFs and peers while figuring out the lab assignments, all assignments are to be completed independently.

Visit the Learning Commons' guide to academic integrity UBC offers an online guide to preventing unintentional plagiarism and organizing your writing. Visit <http://learningcommons.ubc.ca/resource-guides/avoiding-plagiarism/>

Do not copy and paste text from other sources, including other people's work, even in a draft. Don't even read another person's lab assignment before completing your own, as you might unintentionally misrepresent those words as your own in a later draft (which would still qualify as plagiarism).

In cases of lab assignments that have an unusually high degree of overlap in their responses, both parties will receive zero for the assignment, and both will be called in to explain. Cases of cheating will be reported to the department and the university.

Keep up to date with course material and prepare well. Avoid putting yourself in panic mode come exam and deadline time. Treat every assignment and exam as a test of *your* knowledge, without any unauthorized aids of any kind.

If you have any questions about how to seek advice from peers without crossing the plagiarism boundary, please see your Instructor or TF before handing in your assignment.

Our Course Schedule

This plan is subject to change. Changes will be announced in class and/or posted on the Connect course website.

Note that “**New Statistics**” refers to the one required supplemental reading, which is available as a link on Connect:

Cumming, G. (2014). The new statistics: Why and how. *Psychological Science*, 25, 7-29. DOI: 10.1177/0956797613504966

	Date	In-Class Topic	Pagano Reading	Assignment Schedule	Demos, Exams
1	Mon Jan 4	Syllabus	Ch 1 <i>New Statistics p.1-5</i>		
	Wed Jan 6	Basic math & measurement refresher	Ch 1, Ch 2		
	Fri Jan 8	Frequency Distributions	Ch 3	CogLab “Stroop” due noon	
2	Mon Jan 11	Percentiles			
	Wed Jan 13	Central Tendency and Variability	Ch 4		
	Fri Jan 15	Normal Curve and...	Ch 5	SurveyMonkey Survey due noon	SPSS Demo 1
3	Mon Jan 18	Standard Scores			
	Wed Jan 20	Catch-up, Review		Assignment 1 due in class noon	
	Fri Jan 22			CogLab “Memory Span” due noon	Exam 1 Ch1-5
4	Mon Jan 25	Correlation	Ch 6		
	Wed Jan 27	Correlation & Linear Regression	Ch 7		
	Fri Jan 29	Linear Regression		CogLab “Change Detection” due noon	SPSS Demo 2
5	Mon Feb 1	Linear Regression			
	Wed Feb 3	Random Sampling and Probability	Ch 8	Assignment 2 due in class noon	
	Fri Feb 5	Probability Rules (cont’d)		CogLab “False Memory” due noon	
6	Mon Feb 8	<i>Family Day Provincial Holiday ~ UBC Closed</i>			
	Wed Feb 10	Catch-up, Review			SPSS Demo 3
	Fri Feb 12			CogLab “Risky Decisions” due noon	Exam 2 Ch6-8
<i>Spring Break</i>					
7	Mon Feb 22	Binomial Distribution	Ch 9		
	Wed Feb 24	Hypothesis Testing using sign test	Ch 10	Assignment 3 due in class noon	
	Fri Feb 26	Hypothesis Testing using sign test			
8	Mon Feb 29	Sampling Distributions & z-test	Ch 12		
	Wed Mar 2	Sampling Distributions & z-test			
	Fri Mar 4	Sampling Distributions & z-test			SPSS Demo 4
9	Mon Mar 7	Power	<i>New Statistics p.17-19 (skim for gist)</i>		
	Wed Mar 9	Catch-up, Review		Assignment 4 due in class noon	
	Fri Mar 11				Exam 3 Ch9-12
10	Mon Mar 14	Student’s t-test for single samples	Ch 13		
	Wed Mar 16	Student’s t-test for single samples			
	Fri Mar 18	Confidence Intervals and <i>p</i> values	<i>New Statistics p.5-13</i>		SPSS Demo 5
11	Mon Mar 21	Confidence Intervals and <i>p</i> values			
	Wed Mar 23	Student’s t-test for groups	Ch 14	Assignment 5 due in class noon	
	Fri Mar 25	<i>Good Friday UBC Closed</i>			
12	Mon Mar 28	<i>Easter Monday UBC Closed</i>			
	Wed Mar 30	Student’s t-test for groups			
	Fri Apr 1	Student’s t-test for groups			SPSS Demo 6
13	Mon Apr 4	One-Way ANOVA	Ch 15		
	Wed Apr 6	One-Way ANOVA			
	Fri Apr 8	Catch-up, Review	<i>New Statistics p.20-21</i>	Assignment 6 due in class noon	

The final exam date will be set by the registrar. Do not book travel during exam period: April 12 to 30, including Saturdays.

The **Final Exam will feature** most heavily the new material covered since Exam 3, but will draw from all class and reading material.

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