ANALYSIS OF BEHAVIOURAL DATA
Dr. Linda Scratchley

Course Information
Section 1:   Mondays, Wednesdays, and Fridays 9:00 – 9:50 a.m. in AERL 120
Section 2:   Mondays, Wednesdays, and Fridays 10:00 – 10:50 a.m. in AERL 120
Section 3:   Tuesdays and Thursdays 9:30 – 10:50 a.m. in AERL 120
Website: www.vista.ubc.ca (Please do not email me using Vista)

Instructor
Name: Linda Scratchley
Office: Kenny Building, Room 2524
Email: lscratchley@shaw.ca (for emergencies/appointments only)
Phone: (604) 822-5581 (no voice mail)
Office Hour: Mondays 11:00 to 12:00
               or by appointment

Teaching Assistants/Fellows
Name: Michael Barrus
Office: Kenny Building, Room 3514
Email: michaelbarrus@psych.ubc.ca
Office Hour: Fridays 12:00 to 1:00 p.m.

Name: Joseph Chisholm
Office: Kenny Building, Room 3606
Email: jchisholm@psych.ubc.ca
Office Hour: Wednesdays 11:00 to 12:00

Teaching Assistants/Fellows (cont'd)
Name: Lauren Human
Office: Kenny Building, Room 3522
Email: lhuman@psych.ubc.ca
Office Hour: Tuesdays 2:00 to 3:00 p.m.

Name: Julia Kam
Office: Kenny Building, Room 3508
Email: julia@psych.ubc.ca
Office Hour: Tuesdays 12:00 to 1:00 p.m.

Name: Eleni Nasiopoulos
Office: Kenny Building, Room 3010
Email: enasiopoulos@psych.ubc.ca
Office Hour: Thursdays 2:30 to 3:30 p.m.

Name: Mason Silveira
Office: Kenny Building, Room 3512
Email: silveira.mason@psych.ubc.ca
Office Hour: Wednesdays 4:00 to 5:00 p.m.

Required Materials
1. Hopkins, K. D., Hopkins, B. R., & Glass, G. V. (1996). Basic Statistics for the Behavioural Sciences (3rd edition). Boston, MA: Allyn and Bacon. This is a reprint from the bookstore, so it looks like a course pack.
2. Scratchley, L. (2011). PSYC 218 Class Notes. This course pack contains copies of my lecture notes, the data for class examples, and the solutions to the chapter review questions.
3. You will need a calculator for this course. I recommend buying the cheapest nonprogrammable scientific calculator that you can find. Graphing calculators are not permitted.
4. Francis, G. & Neath, I. (2007) *CogLab Online with Access Code Version 2.0*. You can buy printed access codes at the bookstore or purchase CogLab direct from the publisher by going to www.nelsonbrain.com, searching for ISBN 9780495107781, and clicking "Add to cart" to purchase.
5. Cuttler, C. (2010) A Student Guide to SPSS. This lab guide comes bundled with SPSS version 18 (compatible for PC and MAC).

Note that you are not being charged for the SPSS 18 that is bundled with the SPSS Guide. If the disk works, you've received a bonus. If SPSS 18 is not compatible with your operating system, you can download a student version of SPSS 21 directly from the internet for $49.87. For PC users, the link is http://e5.onthehub.com/WebStore/OfferingDetails.aspx?ws=49c547ba-f56d-dd11-bb6c-0030485a6b08&vsro=8&o=e5b8746a-1c0f-e211-bd05-f04da23e67f6. For MAC users, the link is http://e5.onthehub.com/WebStore/OfferingDetails.aspx?ws=49c547ba-f56d-dd11-bb6c-0030485a6b08&vsro=8&o=c3b8746a-1c0f-e211-bd05-f04da23e67f6. SPSS can be accessed on the computers in Buchanan B101, but note that the room is often in use for classes. The room schedule can be found at http://isit.arts.ubc.ca/support/labs/b101/. **Make sure that you are registered with Coglab prior to the first Coglab experiment being due, and make sure that you have access to SPSS prior to the first in-class SPSS demo; late deductions will not be cancelled because you had trouble registering with Coglab or loading SPSS**.

Course Objectives
This course is designed to provide you with a basic understanding of how to analyze research data by hand and using computer software. Topics covered include an introduction to the most frequently used descriptive statistics (e.g., central tendency, variability, correlation) and an introduction to the most frequently used inferential statistics (e.g., confidence intervals, t-test, ANOVA). By the end of the course you should have a good conceptual understanding of how and why we use these statistics.

Lectures, Readings and Assignments
Attendance at lectures is essential for students who wish to do well in the course. You are responsible for all lecture material, textbook material and lab assignments.

Evaluation
Four examinations will be given throughout the course, accounting for 73% of your final grade (18% for each midterm and 19% for the final exam). You will be required to complete 6 lab assignments on your own time. The lab component will account for 24% of your final grade (4% per lab assignment).   The remaining 3% of your grade will be based on a research experience component (REC) which involves spending three hours participating in psychology studies through the Department of Psychology's Human Subject Pool (HSP) system (1% per hour). The weighted sum of the four exams, six lab assignments, and research experience component will constitute your Psychology 218 course grade.

Assignment	Percent	Due Date	Topic
Midterm 1	18%	Jan. 21 or 22	Chapters 1-5
Assignment 1	4%	Jan. 23 or 24 in class	Descriptive Statistics
Assignment 2	4%	Feb. 4 or 5 in class	Correlation
Assignment 3	4%	Feb. 12 or 13 in class	Regression
Midterm 2	18%	Feb. 14 or 15	Chapters 6-8
Assignment 4	4%	Mar. 11 or 12 in class	Single Sample Hypothesis Testing
Midterm 3	18%	Mar. 13 or 14	Chapters 9-11.16
Assignment 5	4%	Mar. 25 or 26 in class	Two Sample Hypothesis Testing
Assignment 6	4%	Mar. 27 or 28 in class	Inferences Regarding Correlations
Final Exam	19%	TBA	Chapters 11.17-11.20, 13, 14
Research Experience	3%	Prior to Mar. 31	Various

Examinations

Examinations will be entirely multiple choice. The exams will not be cumulative, although the material from each subsequent section of the course is built upon the material from the previous sections. The exam grades will be posted on Vista.

Lab Component

Prior to each of the assignments, you will have to complete a short CogLab experiment or survey on your own time. The CogLab experiments and survey each require 10-30 minutes to complete. You will automatically lose 1/4 (25%) of your assignment grade (i.e., 1% of your total course grade) for each experiment or survey that you do not complete by the due date and time! The due dates and times are listed at the end of the syllabus. You will not be able to make up marks lost because of your failure to complete a CogLab experiment or survey on time. Instructions for setting up a CogLab account and completing the experiments can be found on the Vista website. The purpose of the CogLab experiments and survey is to have you generate the data that you will summarize/analyze for your assignments. Our hope is that you will gain a deeper understanding of the data by being involved in the experiments and surveys, making the analyses more relevant and meaningful to you. You are only required to complete the experiments by the due date and times listed at the end of the course syllabus; you are not required to answer the questions in the CogLab manual.

The lab assignments are intended to complement the lectures by giving you practical experience with both analyzing data using SPSS software and reporting results. Six times throughout the course one of your teaching fellows will come to class to provide a 10-minute demonstration of some of the functions of SPSS. Following each demonstration you will be given an assignment to complete on your own time (assignments will be posted on Vista). The assignments will require you to analyze the data your class generates by participating in the CogLab experiments and survey. You will have about one week to complete each of the assignments and you will lose 1/8 (12.5%) of your assignment grade (i.e., 0.5% of your total course grade) for each day your assignment is late.

Lab assignments are to be completed independently. You are encouraged to meet with your teaching fellows during their office hours or tutorials if you require assistance with the assignments. You may also use the discussion boards on the course website (Vista) to discuss, with your peers, problems you are having with the assignments. While you may ask your teaching fellows or peers for guidance, you are required to complete the analyses and write ups on your own.

Research Experience Component (REC)

You can locate and sign up for studies by going to https://hsp.psych.ubc.ca. If you don't already have a user account you will first need to request an HSP user account on that webpage. Once you have an account and have logged into it, you will be able to browse through all of the studies that you can participate in, sign up for studies and confirm your accumulated credits. The subject pool typically closes the last week of class so you are strongly urged to participate and confirm your accumulated credits *before* the last week of class. Once the subject pool closes, you will have no opportunity to make up any unacquired credits. Further instruction on how to use the HSP system can be found in the guide entitled "Subject Pool Information for Participants" at http://www.psych.ubc.ca/resguide.psy.

Because introducing you to research is an important part of this course, the REC is required. However, as an alternative to participation in subject pool studies, you may choose to fulfill the REC by completing three library writing projects. If you choose to complete library writing projects, in which you read and summarize a research article, each article summary counts as one hour of research

participation (1 credit). You must select a research article (not a letter to the editor, commentary, or review paper) published in 2000 or later in the journal Psychological Science. Each summary should be about 500 words and should include the research question, methods and results of the study. If you choose the library option you must (a) create an account on the online HSP system (https://hsp.psych.ubc.ca), (b) include your name, email address, student number, course, section, and instructor on each summary and (c) submit your complete article summaries, together with copies of the summarized articles using turnitin (www.turnitin.com; Class ID: 2828541; Password: library) at least 10 days before the end of class. Complete instruction on how to complete the library writing projects can be found at http://www.psych.ubc.ca/resguide.psy in the guide entitled "Subject Pool Information for Participants." Please note that you will not receive your credits unless you closely adhere to the complete instructions detailed in the online guide.

Academic Misconduct
Lab assignments are to be completed independently. You may use the course website (Vista) to discuss the assignments with your teaching fellows and peers. However, you are required to complete the analyses and write ups on your own. Sharing your work with another student (e.g., providing answers to lab assignment questions) or using another student's work is considered cheating and will result in major deductions. Collaborators will receive grades of 0.

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 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 0 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 a failing grade for the course, suspension from the University, cancellation of scholarships, or a notation added to a student's transcript.

Psychology Department's Policy on Grade Distributions and Scaling
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 mean grade for this class is 70 for a good class, 68 for an average class, and 66 for a weak class, with a standard deviation of 14. Scaling may be used in order to comply with these norms; grades may be scaled up or down as necessary by the instructor or department.

Missed Midterm
If you know you are going to be away on an exam date, notify the instructor well in advance so that alternative arrangements can be made. If you miss a midterm due to illness, contact the instructor before the exam or on the day of the exam. Failure to immediately notify the instructor that you missed the exam may result in a grade of 0 with no opportunity to write a make up. You must have a note from your doctor confirming that you were sick on the day of the exam. You will not be permitted to write the exam without this note. If you miss an exam for a reason other than illness, a decision about how to proceed will be made on a case by case basis. However, in most cases, missing an exam will result in a grade of 0 on the exam and no opportunity to write a make-up exam.

Important Due Dates and Course Schedule for Sections 001 and 002 (MWF)

Dates	Topics	Ch.	Important Events and Due Date
Jan. 2	Review Course Outline	1,2	
Jan. 4/7	Central Tendency, Variability	3,4	
Jan. 9/11/14	Normal Distribution, Standard Scores	5	Jan. 9: CogLab "Stroop" due at 8:00 a.m. Jan. 14: SPSS Demo 1
Jan. 16/18	Correlation	6	Jan. 16: Survey Monkey Survey due at 8:00 a.m.
Jan. 21	**Midterm 1**	**1-5**	
Jan. 23	Interpreting Correlation Coefficients	7	**Jan. 23: Assignment 1 due in class**
Jan. 25/28/30 Feb. 1	Regression	8	Jan. 25: SPSS Demo 2 Jan. 28: CogLab "Memory Span" due at 8:00 a.m.
Feb. 4/6/8	Sampling, Interval Estimation	9	**Feb. 4: Assignment 2 due in class** Feb. 4: SPSS Demo 3
Feb. 11	**Family Day**		**NO CLASSES**
Feb. 13	Inferences Regarding the Population Mean	10	**Feb. 13: Assignment 3 due in class**
Feb. 15	**Midterm 2**	**6-8**	
Feb. 18-22	**Mid-Term Break**		**NO CLASSES**
Feb. 25/27	Inferences Regarding the Population Mean	10	Feb. 25: CogLab "Change Detection" due at 8:00 a.m. Feb. 27: CogLab "Risky Decisions" due at 8:00 a.m.
Mar. 1/4/6/8/11	Statistical Hypotheses Involving Two Means	11	Mar. 4 SPSS Demo 4 Mar. 6: CogLab "False Memory" due at 8:00 a.m. **Mar. 11: Assignment 4 due in class**
Mar. 13	**Midterm 3**	**9-11.16**	
Mar. 15/18/20	Inferences Regarding Correlations	13	Mar. 18: SPSS Demo 5 Mar. 20: SPSS Demo 6
Mar. 22/25/27	One-Factor Analysis of Variance	14	**Mar. 25: Assignment 5 due in class** **Mar. 27: Assignment 6 due in class**
Mar. 29	**Good Friday**		**NO CLASSES**
April 1	**Easter Monday**		**NO CLASSES**
April 3	Review	13	
April 5	Review	14	
TBA			**FINAL EXAM**

Important Due Dates and Course Schedule for Section 003 (T Th)

Dates	Topics	Ch.	Important Events and Due Date
Jan. 3	Review Course Outline Central Tendency, Variability	1,2 3,4	
Jan. 8	Central Tendency, Variability	3,4	Jan. 9: CogLab "Stroop" due at 8:00 a.m.
Jan. 10/15	Normal Distribution, Standard Scores	5	Jan. 15: SPSS Demo 1 Jan. 16: Survey Monkey Survey due at 8:00 a.m.
Jan. 17	Correlation	6	
Jan. 22	**Midterm 1**	**1-5**	
Jan. 24	Interpreting Correlation Coefficients	7	**Jan. 24: Assignment 1 due in class**
Jan. 29/31 Feb. 5	Regression	8	Jan. 28: CogLab "Memory Span" due at 8:00 a.m. Jan. 29 SPSS Demo 2 **Feb. 5: Assignment 2 due in class** Feb. 5: SPSS Demo 3
Feb. 7/12	Sampling, Interval Estimation	9	**Feb. 12: Assignment 3 due in class**
Feb. 14	**Midterm 2**	**6-8**	
Feb. 18-22	**Mid-Term Break**		**NO CLASSES**
Feb. 26/28	Inferences Regarding the Population Mean	10	Feb. 25: CogLab "Change Detection" due at 8:00 a.m. Feb. 27: CogLab "Risky Decisions" due at 8:00 a.m.
Mar. 5/7/12	Statistical Hypotheses Involving Two Means	11	Mar. 5 SPSS Demo 4 Mar. 6: CogLab "False Memory" due at 8:00 a.m. **Mar. 12: Assignment 4 due in class**
Mar. 14	**Midterm 3**	**9-11.16**	
Mar. 19/21	Inferences Regarding Correlations	13	Mar. 19: SPSS Demo 5 Mar. 21: SPSS Demo 6
Mar. 26/28	One-Factor Analysis of Variance	14	**Mar. 26: Assignment 5 due in class** **Mar. 28: Assignment 6 due in class**
April 2	Review	13	
April 4	Review	14	
TBA			**FINAL EXAM**