

RESEARCH METHODS IN PSYCHOLOGY

PSYC 217, 3 Credits

Winter 2016, Term 1

Section 004: Tuesdays and Thursdays 9:30 am – 11:00 am, FSC 1221

Section 006: Tuesdays and Thursdays 2:00 pm – 3:30 pm, AERL 120

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I. Required Course Materials

1. Cozby, P. C., & Rawn, C. D. (2016). *Methods in Behavioural Research* (2nd Canadian Ed.). Toronto, ON: McGraw-Hill Ryerson.
 2. Cuttler, C. (2010). *Research Methods in Psychology*. Dubuque, IA: Kendall Hunt.
 3. iClicker
 4. Stanovich, K. E. (2013). *How to Think Straight about Psychology* (10th ed.). Boston, MA: Pearson.
- 2 chapters are required. The book will be placed on 2-hour reserve at Koerner Library.

II. Course Description and Learning Outcomes

In this course, you will acquire a foundation in various research methods in psychology. Together, we will explore the scientific method, basic scientific concepts, and the description and interpretation of data. We will also discuss ethical issues in the field of psychology. You will have the opportunity to apply your knowledge by designing, conducting, and reporting the results of your own experiment in a written paper and a poster presentation. By the end of this course, you will be prepared to critically consume claims made by the media and to pursue further research experiences in psychology.

By the end of this course, students will be able to:

- Communicate about the scientific method and research results.
- Critically interpret study designs and research results.
- Generate and evaluate research questions, hypotheses, and predictions.
- Compare and contrast experimental, quasi-experimental, and non-experimental designs.
- Review and discuss ethical issues in the field of psychology.
- Describe, summarize, and analyze simple data.
- Apply their knowledge by designing and conducting an experiment.

III. Learning Appraisals

1. Midterms	28% (2 midterms — 14% each)
2. Final Exam	30%
3. Research Experience Component	5%
4. Participation	2%
5. Research Project	35%
a. Team Poster Presentation	(10%)
b. Individual Research Report	(25%)

1) **Midterms X 2** (28% — 14% each): There will be two midterms. These exams will be a mixture of multiple-choice and short answer questions. Each midterm will be worth 14% of your overall grade.

Midterm 1 (October 4th) Covers Chapters 1, 2, 4, 5, 8, & 9 and the corresponding lectures.

Midterm 2 (November 8th) Covers Chapters 3, 7, 10, 11, & 12 and the corresponding lectures.

2) **Final Exam** (30%) (Date TBA): The final exam will be scheduled during the official exam period (December 6 to December 21 inclusive). This exam will be cumulative and will cover all material taught in the course. The exam will contain a mix of multiple-choice and short answer questions. You must be available to write the final exam at any scheduled time during the official exam period. If you have three or more final exams that start and finish within a 24-hour period, you may request to write the second exam on a different day. You are, however, required to make this request to the instructor giving the second exam at least one month before the exam.

3) **Research Experience Component (REC)** (5%): Because introducing you to research is an important part of this course, you will be required to complete a REC. The REC is worth 5% of your course grade: **1 hour of participation OR 1 article summary = 1% x 4 AND 1% for completing the online Tri-Council Policy Statement tutorial** (details given in Lab 1).

One way to fulfill the REC requirement is to spend **FOUR** hours participating in psychology studies through the Department of Psychology's Human Subject Pool (HSP) system. You can locate and sign up for studies by going to <https://ubc-psych.sona-systems.com>. If you don't already have a user account, you will first need to request one. Once you have an account, you will be able to browse through the studies available for participation, sign up for studies, and confirm your accumulated credits. The subject pool closes during the last week of classes, so you are urged to participate and confirm your credits before this deadline. Once the subject pool closes, you will have no further opportunity to participate in studies for course credit, and you will have no opportunity to make up these lost credits. Further instruction on how to use the HSP online system can be found at <http://psych.ubc.ca/internal/human-subject-pool/> in the guide entitled "Subject Pool Information for Participants".

Another way to fulfill the REC requirement is to complete **FOUR** article summary projects. If you choose this alternative, you will be expected to read and summarize four different research articles. Each article summary counts as one hour of research participation (one credit and 1% of your final course grade). Complete instructions on how to complete the article summary projects can be found at <http://psych.ubc.ca/internal/human-subject-pool/> 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.

4) Participation (2%): Attendance at lectures is important if you want to do well in the course. You will be expected to come to class and to participate by answering questions using your iClicker. Please be sure to register your iClicker ID by clicking on "iClicker Registration" on the course Connect page. The instructor will aim to incorporate several clicker questions into each lecture. Participation will be graded in the following manner:

If you respond to...	You will receive...
85-100% of all clicker questions	2 %
75-84% of all clicker questions	1.5%
65-74% of all clicker questions	1%
50-64% of all clicker questions	0.5%
0-49% of all clicker questions	0 %

It is your responsibility to bring your iClicker to every class and to ensure its batteries are functional. You will receive no participation credit for a class if you forget to bring your iClicker to that class or if your clicker's batteries run out. You will receive no participation credit for classes that you miss.

5) Research Project (35%—10% Team, 25% Individual): The purpose of this project is to give you an opportunity to apply what you are learning in class to your own research project. You will work in a team to generate and test a hypothesis about human behaviour, and you will report these results in written and poster formats.

Lab Meetings will take place during class time, but in a smaller room. *Attendance at all Lab Meetings and the Poster Session (December 2, 5-6:30pm) is required. The first three lab meetings involve crucial teamwork and are therefore mandatory. You will lose 20% of your lab grade (i.e., 7% of your course grade) for each of the first three lab meetings that you miss.* See the "Course Policies" section for the procedure if you absolutely must miss one of these events.

LAB MEETING 1 – RESEARCH DESIGN (SEPTEMBER 29): You will meet with your team to brainstorm a research question and design a brief (5-minute) minimal risk experiment to address the question. Your Teaching Fellow (TF) will be present to assist and guide you.

LAB MEETING 2 – PROPOSAL PRESENTATION (OCTOBER 13): Your team will give a 5-minute presentation of your proposed research question and design. During this presentation you should: i) state your research question and why it is interesting, ii) describe the independent variable and how it will be manipulated, iii) describe the dependent variable and how it will be measured, iv) discuss any controls you plan to implement, v) state your hypothesis. Each presentation will be followed by a 5-minute discussion period where your classmates and TF will ask questions and provide suggestions for improving your study design. **Failing to present a proposal will result in all team members receiving a 3% deduction.**

LAB MEETING 3 – DATA COLLECTION (OCTOBER 27): You will collect data for your experiment using your classmates as participants. Your team must arrive to this meeting with all of the materials needed to conduct your experiment. Your team may also opt to collect data (along with other teams across all sections) on Monday, October 31st, 5:00-6:30 pm in SWNG 221. Collecting data outside these two meeting times and/or with individuals other than your 217 classmates and TFs is not covered by our ethics approval certificate and will result in a deduction from your lab grade.

LAB MEETING 4 – DATA SUMMARY (NOVEMBER 3): Your TF will help you learn how to summarize your data by calculating descriptive statistics and creating graphs using Microsoft Excel. Come prepared with your raw data and a plan for summarizing it that you can discuss with your TF.

LAB MEETING 5 – WRITING AN APA STYLE REPORT (NOVEMBER 17): Your TF will help you learn how to write an APA style research report. It is recommended that you come prepared with a rough draft of your paper and specific questions about its preparation.

A) POSTER SESSION (10%): DECEMBER 2, 5-6:30PM, EAST ATRIUM OF UBC LIFE SCIENCES INSTITUTE (2350 Health Sciences Mall) Your team will prepare a poster that summarizes your research project's hypothesis, method, results, and conclusions. During the poster session, you will be asked to evaluate your peers' posters (from a different section). Your poster will be evaluated by five peers (the average of these ratings will equal 3% of your grade) and your TF (whose rating will comprise the other 7% of your grade). More details about how to prepare for the poster and presentation, as well as how to evaluate others' posters will be provided later in the term. **NOTE: TO ACCOMMODATE ALL SECTIONS, THE POSTER SESSION IS IN THE EVENING ON THE LAST FRIDAY OF THE TERM. IT IS A MANDATORY COURSE EVENT; MARK YOUR CALENDAR NOW.**

B) INDIVIDUAL RESEARCH REPORT (25%): NOVEMBER 29 at 11:59 PM The most important step in the research communication process is for researchers to clearly document their research and the contribution it makes to understanding human behaviour in a written manuscript. This individual report is designed to give you experience with this process. Reports are to be prepared independently; each team member must prepare a report separately from other team members. Evidence of collaboration or team work in writing the reports will result in major deductions from your lab grade and in severe cases may result in a grade of zero on the report.

Submission: A copy must be submitted to Connect AND an identical copy must be submitted online to TurnItIn (by 11:59pm). If you fail to do either by the deadline, your report will be considered late. You will lose 10% for each day the report is late. To submit your report to TurnItIn go to <http://www.turnitin.com>, create an account, enter our course ID (Section 004: 13403339), (Section 006: 13403347) and password (**methods**), and upload the same assignment.

Grading: The lab report is worth 25% of your grade. You will be graded on the following: Abstract and Introduction (5%), Method and Experimental Design (5%), Results and Figures (5%), Discussion (5%), proper use of APA format and writing style (5%).

IV. Course and Department Policies

Course Website: You can find the syllabus, PowerPoint slides, important announcements, and assignment information on the class website on Connect. You are responsible for checking this site frequently. To access our website, go to <http://www.connect.ubc.ca> and log in using your CWL.

Email Etiquette: We (the instructor and TFs) are available and delighted to help students throughout the term! However, we receive hundreds of emails every week. We ask that you please first check the syllabus and course website before emailing us. Your TFs and instructor will make every effort to reply to e-mail in a timely fashion (within 48 hours), but please do not expect responses in the evenings, on weekends, or on holidays. If your question is a simple one, we may be able to answer it via email, but if your question is more complex, we may request that you come in during office hours or make an appointment.

Missed Classes: If you miss all or part of any class, it is your responsibility to speak with one of your classmates to find out what course material and announcements you missed. You will not receive iClicker participation credits for classes that you miss.

Missed Exams: If you miss an exam, you must contact the instructor on the day of the exam. Failure to notify the instructor immediately that you missed the exam may result in a grade of 0 with no opportunity to write a make-up. You must also notify the instructor once you are well and are ready to write the make-up exam. You must have a note from your doctor confirming that you were sick and too ill to write an exam for the period of time extending from the day of the exam to the day that you notify the instructor that you are well and ready to write the make-up exam. You will not be permitted to write the make-up exam without this note. If you miss an exam for a reason other than illness, the instructor will make a decision about how to proceed on a case-by-case basis. In most cases, missing an exam for a reason other than illness will result in a grade of 0 on the exam and no opportunity to write a make-up exam.

Missed Labs 1, 2, 3, and the Poster Session: If you are unable to attend any of those meetings, you must submit the **Request For Excused Absence** form, available on Connect, to Dr. Cheung (course coordinator). This form must be submitted at least 10 days before the date of the event. In case of emergency, the form must be submitted within 3 days of missing the event (or as soon as is physically possible). If your documentation is approved for missing a lab, you will still be responsible for communicating with and contributing to your team but you will not lose points for missing the lab. If your documentation is approved for missing the poster session, your grade will be re-weighted such that the poster session will count for 0% (instead of 10%) and your APA style paper will count for 35% (instead of 25%).

Special Accommodations: UBC accommodates students with disabilities who have registered with the Access and Diversity Office and students whose religious obligations conflict with attendance, submitting assignments, or completing scheduled examinations. Please let your instructor know in the first week of class if you will require any special accommodation.

Psychology Department's Policy on Grade Distributions and Scaling: In order to reduce grade inflation and maintain equity across multiple sections of the same course, all psychology courses are required to comply with departmental norms regarding grade distributions. According to departmental norms, the mean grade for PSYC 217 will be 71 for a good class, 69 for an average class, and 67 for a weak class, with a standard deviation of approximately 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.

Academic Misconduct: Cheating on an exam may result in a grade of 0 on the exam and will lead to a report to the University for appropriate action. Sharing your work on the individual research report with another student or using another student's work is also considered cheating and may result in a grade of 0 on the research report. In addition, both you and your collaborator will be reported to the University for appropriate action. Finally, bringing someone's iClicker to class and answering questions for him/her is considered academic misconduct. If you are caught using someone else's clicker, the clicker will be confiscated; you and the owner of the other clicker may receive 0 for participation; and you will both be reported to the University for appropriate action.

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 scanned and compared to over 4.5 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 plagiarism; instructors receive copies of these reports for every student in their class.

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 grade of 0 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.

All graded work in this course, unless otherwise specified, is to be original work done independently by individuals. If you have any questions as to whether or not what you are doing is even a borderline case of academic misconduct, please consult your instructor. For details on pertinent University policies and procedures, please see Chapter 5 in the UBC Calendar (<http://students.ubc.ca/calendar>).

V. Course Schedule

*Note: Adjustments to this schedule may be made as needed. Changes will be announced in class and posted on Connect.

Dates	Topics	Readings	Labs & Learning Appraisals
Sept 8	Course Overview Science Basics	Cozby & Rawn Ch 1	
Sept 13	Hypotheses & Falsifiability	Cozby & Rawn Ch 2	
Sept 15	Variables & Operational Definitions	Cozby & Rawn Ch 4	
Sept 20	Measurement Concepts	Cozby & Rawn Ch 5	
Sept 22	Designing Experiments	Cozby & Rawn Ch 8	
Sept 27	Conducting Experiments	Cozby & Rawn Ch 9	
Sept 29		<i>Cuttler Ch 1</i>	Lab #1: Research Design
Oct 4			MIDTERM #1
Oct 6	Ethics of Research	Cozby & Rawn Ch 3	
Oct 11	Ethics of Research (con't)		
Oct 13		<i>Cuttler Ch 2</i>	Lab #2: Proposal Presentation
Oct 18	Questionnaire Design Complex Design	Cozby & Rawn Ch 7 Cozby & Rawn Ch 10	
Oct 20	Complex Design (con't)		
Oct 25	Quasi-Experimental Design	Cozby & Rawn Ch 11	
Oct 27		<i>Cuttler Ch 3</i>	Lab #3: Data Collection
Nov 1	Describing Data	Cozby & Rawn Ch 12 (up to p. 260)	
Nov 3		<i>Cuttler Ch 4</i>	Lab #4: Data Summary
Nov 8			MIDTERM #2
Nov 10	Probabilistic Reasoning Inferential Statistics	Stanovich Ch 10, 11 Cozby & Rawn Ch 13	
Nov 15	Inferential Statistics (con't)		
Nov 17		<i>Cuttler Ch 5</i>	Lab #5: Writing an APA report
Nov 22	Observation & Case Studies	Cozby & Rawn Ch 6	
Nov 24	Generalization and Interpretation	Cozby & Rawn Ch 14	
Nov 29	Generalization and Interpretation (con't)		Individual Research Report at 11:59 PM
Dec 1	Big Picture Issues & Wrap up		

Acknowledgements: The design of this course and syllabus were informed by similar courses designed by Dr. Catherine Rawn and Dr. Alyssa Croft.