



Psychology 607: Advanced Research Design and Methodology in Psychology

Instructor:	John Ellard	Lecture Location:	Administration 247B
Phone:	403-220-4960	Lecture Days/Time:	Thurs., 1:00 – 3:45 p.m.
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Office Hours:	Tuesday, 3:00 – 4:00 p.m.		

Course Description and Goals

Calendar Description

Survey of advanced topics in the conduct of psychological research including issues in philosophy of science; origins of research ideas; validity and reliability; measurement; experimental, quasi-experimental, and non-experimental designs; survey research; specialized methods such as computer simulation, psychophysiological methods, event-sampling, online data collection, and cognitive procedures; and ethics.

Course Objectives

Conducting quality psychological research requires advanced knowledge of methodological theory and practice in addition to data analysis skills. The emphasis in this course is primarily on developing critical thinking skills for designing, executing, and evaluating psychological research rather than the specifics of how to carry out particular methods. To that end, the course is designed to develop skills in thinking clearly about:

- The philosophy of science foundations for psychological science
- Generating good research ideas and planning research
- Research ethics, the ethical context of psychological research, and professional ethics
- Research design and causal inference
- Validity: Statistical conclusion validity, internal validity, construct validity, and external validity
- Measurement theory
- Sources of information: behavioural observation, self-reports, interviews, psychological tests, chronometric and psychophysical measures, and measures from neuroscience
- Statistical and non-statistical issues in making appropriate inferences from data
- Theory development in psychology and the relation between theory and data
- Disseminating research findings

Depending on student interest and time, consideration will be given to special topics such as sampling, program evaluation, virtual reality methods, reviewing, and giving talks.

Required Texts

Proctor, R.W., & Capaldi, E.J. (2006). *Why science matters: Understanding the methods of psychological research*. Malden, MA: Blackwell Publishing. This title is available through the University of Calgary Bookstore.

Shadish, W.R., Cook, T.D., & Campbell, D.T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Belmont, CA: Wadsworth Cengage Learning.

Abelson, R.P. (1995). *Statistics as principled argument*. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Additional papers will be assigned and a complete reading list will be posted no later than January 12

Evaluation

<i>Assignment/Test</i>	<i>Proportion of Final Grade</i>	<i>Due</i>
Take home test 1 – February 21	25%	February 28
Take home test 2 – April 11	25%	April 19
Paper preview	Included in paper	
Final paper	30%	April 12
Class assignments & participation	20%	

Assignment Descriptions

Take-home tests (25% each)

These tests are intended to evaluate your mastery of key concepts in the readings as well as critically evaluate and apply the concepts. The tests will be based on assigned readings and will be in essay format.

Final paper (30%)

The final paper is intended to provide an opportunity to think in detail about a research methodology or methodological issue of interest to you. The paper could take any of a number of forms including but not limited to:

- A research proposal where the focus is on advancing a topic through the use of a novel research design or methodology
- A methodological critique of a body of research
- Analysis of a particular methodological issue

The final paper topic **must be approved in advance by the instructor**. This can happen anytime but no later than March 23. In support of the paper proposal, a one to two page outline for the paper must be submitted 24 hours prior to meeting with the instructor.

Class assignments and participation (20%)

To stimulate thought prior to each seminar short weekly assignments, typically in the form a thought piece, will be assigned. These will graded on a pass/fail basis and combined with an assessment of contribution to the seminar discussion each week. With respect to participation, the primary emphasis is on quality not quantity. Attendance every week will be assumed. Quality contributions will be easy to make if you've given yourself time to read and think about the material before class. As a result, recurring evidence of not doing the reading will unavoidably have an effect on the seminar participation portion of the final grade. At this level, thoughtful (but fair) criticism of ideas and research and proposals for new ideas and research are particularly valuable.

Submitting Assignments

All assignments, tests, and the final must be submitted electronically, in Microsoft Word format, via the course Blackboard drop box. The date stamp applied by Blackboard when the document is submitted will be used to assess lateness. Take home tests and final paper will be assigned a 10% per day penalty

Grading Scale

A+	96-100%	B+	80-84%	C+	67-71%	D+	54-58%
A	90-95%	B	76-79%	C	63-66%	D	50-53%
A-	85-89%	B-	72-75%	C-	59-62%	F	0-49%

As stated in the University Calendar, it is at the instructor's discretion to round off either upward or downward to determine a final grade when the average of term work and final examinations is between two letter grades.

To determine final letter grades, final percentage grades will be rounded up or down to the nearest whole percentage (e.g., 89.5% will be rounded up to 90% = A but 89.4% will be rounded down to 89% = A-).

Important Dates

Date	Important Dates
R Jan 12	Class begins.
F Jan 20	Last day to drop a course with tuition refund.
M Jan 23	Last day for registration/change of registration.
Feb 19-26	Reading days. No lecture.
F Apr 13	Last day to withdraw

Date	Tentative Course Schedule
R Jan 12	Course overview and introduction
R Jan 19	Philosophy of science
R Jan 26	Ethics: research and professional ethics, ethical issues in psychological science
R Feb 2	Generating ideas, developing a program of research
R Feb 9	Research design I: Basic issues and design of randomized experiments
R Feb 16	Research design II: quasi-experimental, correlational, and n=1 designs
R Feb 23	Reading days. No class.
R Mar 1	Measurement theory, construct validity
R Mar 8	Observational and self-report sources of data: surveys, tests, interviews
R Mar 15	Chronometric, physiological, and neuroscience sources of data
R Mar 22	Good statistical habits, making appropriate inferences from data
R Mar 29	Graphic and tabular presentation of data
R Apr 5	Generalizing causal inference: meta-analysis and other strategies
R Apr 12	Theory development

Reappraisal of Grades

A student who feels that a piece of graded term work (e.g., term paper, essay, test) has been unfairly graded, may have the work re-graded as follows. The student shall discuss the work with the instructor within 15 days of being notified about the mark or of the item's return to the class. If not satisfied, the student shall immediately take the matter to the Head of the department offering the course, who will arrange for a reassessment of the work within the next 15 days. The reappraisal of term work may cause the grade to be raised, lowered, or to remain the same. If the student is not satisfied with the decision and wishes to appeal, the student shall address a letter of appeal to the Dean of the faculty offering the course within 15 days of the unfavourable decision. In the letter, the student must clearly and fully state the decision being appealed, the grounds for appeal, and the remedies being sought, along with any special circumstances that warrant an appeal of the reappraisal. The student should include as much written documentation as possible.

Plagiarism and Other Academic Misconduct

Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. Consequently, plagiarism or cheating on any assignment is regarded as an extremely serious academic offense. Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Students should examine sections of the University Calendar that present a Statement of Intellectual honesty and definitions and penalties associated with Plagiarism/Cheating/Other Academic Misconduct.

Academic Accommodation

It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 403-220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than 14 days after the start of this course.

Absence From A Test/Exam

Students who miss a term test due to a valid and documented official University reason (illness, domestic affliction, or religious conviction) have 48 hours to contact AND schedule a makeup test with the instructor. The onus is on the student to have a makeup test approved and scheduled within 48 hours, or the makeup test option is forfeited. The same process applies to missed makeup tests. At the instructor's discretion, the makeup test may differ significantly in form and/or content from the missed test. However, the makeup test cannot differ in weight (% of final grade) from the missed test. Except in extenuating circumstances (a documented official University medical excuse), a makeup test must be written within 2 weeks of the missed test. Absence from a final exam, and deferral of a final exam, are handled by Enrolment Services (see http://www.ucalgary.ca/registrar/deferred_final). Students absent

from a final exam must notify the instructor within 48 hours and must then apply for an official deferred final exam no later than the deadline indicated in the Examinations Schedule.

Freedom of Information and Protection of Privacy (FOIP) Act

The FOIP legislation disallows the practice of having student's retrieve tests and assignments from a public place. Therefore, tests and assignments may be returned to students during class/lab, or during office hours, or via the Department Office (Admin 275), or will be made available only for viewing during exam review sessions scheduled by the Department. Tests and assignments will be shredded after one year. Instructors should take care to not link students' names with their grades, UCIDs, or other FOIP-sensitive information.

Evacuation Assembly Point

In case of an emergency evacuation during class, students must gather at the designated assembly point nearest to the classroom. The list of assembly points is found at <http://www.ucalgary.ca/emergencyplan/assemblypoints>

Please check this website and note the nearest assembly point for this course.

Student Ombudsman's Office

The Office of the Student Ombuds provides independent, impartial and confidential support for students who require assistance and advice in addressing issues and concerns related to their academic careers. The office can be reached at 403-220-6420 or ombuds@ucalgary.ca (<http://www.su.ucalgary.ca/services/student-services/student-rights.html>).

Safewalk

The safewalk program provides volunteers to walk students safely to their destination anywhere on campus. This service is free and available 24 hrs/day, 365 days a year.

Call 403-220-5333.

Important Dates

The last day to drop this course and **still receive a tuition fee refund** is **Jan 20, 2012**. Last day for registration/change of registration is **Jan 23, 2012**. The last day to withdraw from this course is **Apr 13, 2012**.