



PSYC 411-L01

Design and Analysis in Psychological Research

Winter 2014

<b>Instructor:</b>	Dr. K. Edwin Sheppard	<b>Lecture Location:</b>	SS 541
<b>Phone:</b>	403-220-8970	<b>Lecture Days/Time:</b>	M/W/F: 9:00-9:50
<b>Email:</b>	<a href="mailto:kesheppa@ucalgary.ca">kesheppa@ucalgary.ca</a>	<b>[Lab and/or TA info in remaining cells (delete if N/A)]</b>	M: W:
<b>Office:</b>	A 157A	<b>Teaching Assistant</b>	
<b>Office Hours:</b>	TBA	<b>TA Office / Email:</b>	TBA

### Course Description and Goals

Experimental design problems and techniques for analysis of psychological data.

### Prerequisites

PSYC 200 – Principles of Psychology I

PSYC 201 – Principles of Psychology II

PSYC 312 – Experimental Design and Quantitative Methods for Psychology

### Required Text

No required text. Set of required handouts available for purchase from the Psychology Undergraduate Students' Association (PSYCHS) in Admin 170. Additional, supplementary (optional) readings are available for photocopying (at your own cost) from PSYCHS if you feel a need to have reference materials. An up-to-date PSYCHS membership will be required to borrow these readings for copying purposes.

### Evaluation

Course Component	Weighting	Date
Midterm Exam #1	25%	Wednesday February 12, 2013
Midterm Exam #2	25%	Monday March 17, 2013
Final Exam	25%	To be scheduled by registrar
Laboratory	25% (5% each)	Five equally-weighted written assignments due throughout the term. See lab schedule below for descriptions.

**Exams (25% each):**

Exams will consist of both short answer and computation questions, with the considerable emphasis on short answer questions. The first midterm (Feb 12) will cover the material up to and including the end of simultaneous multiple regression. The second midterm (Mar 17) will cover hierarchical regression, ANOVA, and planned comparisons. The final exam (to be scheduled by the registrar) will be **cumulative** and therefore cover all course material.

The use of calculators is permitted for computational questions on the exams. However, you will be graded on your work. Accordingly, **if you fail to show your work, you will receive a 0 for the question (i.e., for the computation component of the question) even if the final answer is correct.**

**The use of computers is NOT permitted for exams in this course. Exam answers must be written in the exam booklets provided during the exam.**

**No study aids will be permitted during exams for this course, apart from those that may be provided by the instructor during the exam.**

**Laboratory (25%):**

Students must achieve a passing grade in both the class and the lab components to pass this course. Lab assignments must be handed in at the beginning of the lab on which the due date falls (see the lab Schedule below). Under exceptional conditions (e.g., illness), other arrangements may be made at the discretion of the Teaching Assistant. Late lab assignments will not be accepted, except under exceptional circumstances and at the discretion of the Teaching Assistant with the approval of the instructor. Lab assignments submitted electronically will NOT be accepted.

**Department of Psychology Grade Distribution Policy**

The distribution of grades in Psychology courses (the percentage of A grades, B grades, etc.) will be similar to the distribution of grades in other courses in the Faculty of Arts. The Department monitors the grade distributions of 200-, 300-, and 400-level courses in the Faculty to ensure that the grade distributions in Psychology courses are comparable. Based on these reviews, students can expect that 1) up to 30% of grades in 200- and 300-level psychology courses will be "A" grades (A+, A, and A-), and 2) up to 40% of grades 400-level psychology courses will be "A" grades.

**Department of Psychology Criteria for Letter Grades**

Psychology professors use the following criteria when assigning letter grades:

*A+ grade: Exceptional Performance.* An A+ grade indicates near perfect performance on multiple choice and short answer exams. For research papers/essays/course projects/presentations, an A+ grade is awarded for exceptional work deserving of special recognition and is therefore not a common grade.

*A, A- Range: Excellent Performance.* Superior understanding of course material. Written work is very strong in terms of critical and original thinking, content, organization, and the expression of ideas, and demonstrates student's thorough knowledge of subject matter.

B Range: *Good Performance*. Above average understanding of course material. Written work shows evidence of critical thinking and attention to organization and editing but could be improved in form and/or content.

C Range: *Satisfactory Performance*. Adequate understanding of course material. Knowledge of basic concepts and terminology is demonstrated. Written work is satisfactory and meets essential requirements but could be improved significantly in form and content. Note: All prerequisites for courses offered by the Faculty of Arts must be met with a minimum grade of C-.

D range: *Marginally meets standards*. Minimal understanding of subject matter. Written work is marginally acceptable and meets basic requirements but requires substantial improvements in form and content. Student has not mastered course material at a level sufficient for advancement into more senior courses in the same or related subjects.

F grade: *Course standards not met*. Inadequate understanding of subject matter. Written work does not meet basic requirements. Student has not demonstrated knowledge of course material at a level sufficient for course credit.

### 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-).

### Tentative Lecture Schedule

Date	Topic	Supplemental Reading (optional) and Important Dates
W Jan 8	Winter term lectures begin.  <b>Introduction and overview: Review of GLM basis</b>	Ch. 2 – Pedhauzer
F Jan 10	<b>Introduction and overview: Review of GLM basis</b>	Ch. 3 - Pedhauzer
M Jan 13	<b>Introduction to Correlation and Regression</b>	
W Jan 15	<b>Correlation and Regression continued</b>	
F Jan 17	<b>Regression continued</b>  Last day to drop Winter Term half-courses.	

M Jan 20	<b>Regression continued</b>  Last day to add or swap Winter Term half courses. Last day for change of registration from audit to credit or credit to audit.	
W Jan 22	<b>Regression continued</b>	
F Jan 24	<b>Regression continued</b>  Fee payment deadline for Winter Term fees.	
M Jan 27	<b>Regression continued</b>	
W Jan 29	<b>Regression continued</b>	
F Jan 31	<b>Regression continued</b>	
M Feb 3	<b>Regression continued</b>	
W Feb 5	<b>Regression continued</b>	
F Feb 7	<b>Regression continued</b>	
M Feb 10	<b>Regression continued</b>	
W Feb 12	<b>Midterm Exam 1</b>	<b>To the end of simultaneous multiple regression</b>
F Feb 14	<b>Regression continued</b>	
Feb 16-23	Reading Week. No lectures. University open (except Family Day).	
M Feb 17	Alberta Family Day, University closed (except Taylor Family Digital Library, Law, Medical, Gallagher and Business Libraries). No lectures.	
M Feb 24	<b>Regression analysis continued</b>	
W Feb 26	<b>Regression analysis continued</b>	
F Feb 28	<b>Introduction to ANOVA</b>	
M Mar 3	<b>ANOVA Continued</b>	
W Mar 5	<b>ANOVA Continued</b>	
F Mar 7	<b>ANOVA Continued</b>	
M Mar 10	<b>ANOVA Continued</b>	
W Mar 12	<b>Planned Comparisons</b>	
F Mar 14	<b>Planned Comparisons continued</b>	
M Mar 17	<b>Midterm Exam 2</b>	<b>From hierarchical regression to the end of planned comparisons</b>
W Mar 19	<b>Mixed Model Regression</b>	
F Mar 21	<b>Mixed Model Regression continued</b>	
M Mar 24	<b>Mixed Model Regression continued</b>	
W Mar 26	<b>Mixed Model Regression continued</b>	

	<b>ANCOVA</b>	
F Mar 28	<b>ANCOVA continued</b>	
M Mar 31	<b>Multivariate Analysis of Variance (MANOVA)</b>	
W Apr 2	<b>MANOVA continued</b>	
F Apr 4	<b>MANOVA continued</b>	
M Apr 7	<b>MANOVA continued</b>	
W Apr 9	<b>Discriminant Function Analysis (DFA)</b>	
F Apr 11	<b>DFA Continued</b>	
M Apr 14	<b>DFA Continued</b> <b>Exam review (time permitting)</b>  Winter Term Lectures End. Last day to withdraw from full courses and Winter Term half courses.	
Apr 19-29	Winter Term Final Examinations.	

### Tentative Laboratory Schedule

Date	Topic	Assignments and due dates
Jan 8-10	<b>NO LABS THIS WEEK.</b>	
Jan 13 – 15	Lab orientation	<b>Bring your completed questionnaire to lab</b>
Jan 20 – 22	Correlation and Linear Regression	<b>Receive Assignment 1 (linear regression)</b>
Jan 27 – 29	Multiple Regression	<b>Receive Assignment 2 (multiple regression)</b> <b>Assignment 1 due</b>
Feb 3 – 5	Exam review	<b>Assignment 2 due.</b>
Feb 10 – 12	<b>NO LABS THIS WEEK. EXAM WEEK.</b>	
Feb 16-23	Reading Week. No lectures. University open (except Family Day).	
M Feb 17	Alberta Family Day, University closed (except Taylor Family Digital Library, Law, Medical, Gallagher and Business Libraries). No lectures.	
Feb 24 – 26	Hierarchical regression	
Mar 3 – 5	ANOVA and planned comparisons	<b>Receive assignment 3 (ANOVA)</b>
Mar 10 – 12	Exam Review	<b>Assignment 3 due.</b>
Mar 17 – 19	<b>NO LABS THIS WEEK. EXAM WEEK.</b>	
Mar 24 – 26	Mixed Model Regression	<b>Receive Assignment 4 (MMR).</b>

Mar 31 – Apr 2	Multivariate Analysis of Variance (MANOVA)	<b>Receive Assignment 5 (MANOVA).</b> <b>Assignment 4 due.</b>
Apr 7 – 9	Discriminant Function Analysis. Exam review.	<b>Assignment 5 due.</b>
Apr 14	<b>NO LABS.</b> Winter Term Lectures End. Last day to withdraw from full courses and Winter Term half courses.	

### 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; no reappraisal of term work is permitted after the 15 days. 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

Makeup tests/exams are NOT an option without an official University medical excuse (see the University Calendar). A completed Physician/Counselor Statement will be required to confirm absence from a test/exam for health reasons; the student will be required to pay any cost associated with this Statement. Students who miss a test/exam have 48 hours to contact the instructor and to schedule a makeup test/exam. Students who do not schedule a makeup test/exam with the instructor within this

48-hour period forfeit the right to a makeup test/exam. At the instructor's discretion, a makeup test/exam may differ significantly (in form and/or content) from a regularly scheduled test/exam. Except in extenuating circumstances (documented by an official University medical excuse), a makeup test/exam must be written within 2 weeks of the missed test/exam.

### **Travel During Exams**

Consistent with University regulations, students are expected to be available to write scheduled exams at any time during the official December and April examination periods. Requests to write a make-up exam because of conflicting travel plans (e.g., flight bookings) will NOT be considered except under exceptional circumstances. Students are advised to wait until the final examination schedule is posted before making any travel arrangements.

### **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 255), 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.

### **Course Credits for Research Participation (Max 2% of final grade)**

Students in most psychology courses are eligible to participate in Departmentally-approved research and earn credits toward their final grades. A maximum of two credits (2%) per course, including this course, may be applied to an individual's final grade. **To get 2%** added to the final grade in a full-year course, like this one, you have to acquire **a total of 4 bonus credits** towards the course. These credits may be acquired in the Fall and/or the Winter Session. The demand for timeslots may exceed the supply in a given term. Thus, students are not guaranteed that there will be enough studies available to them to meet their credit requirements. Students should seek studies early in the term and should frequently check for open timeslots. Students can create an account and participate in Departmentally-approved research studies at <http://ucalgary.sona-systems.com>. The last day to participate in studies and to assign or reassigned earned credits to courses is **Apr 14<sup>th</sup>, 2014**.

### **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 Organizations**

Psychology students may wish to join the Psychology Undergraduate Students' Association (PSYCHS). They are located in Administration 170 and may be contacted at 403-220-5567.

**Student Union VP Academic:** Phone: 403-220-3911

[suypaca@ucalgary.ca](mailto:suypaca@ucalgary.ca)

**Student Union Faculty Rep.:** Phone: 403-220-3913

[socialscirep@su.ucalgary.ca](mailto:socialscirep@su.ucalgary.ca)

### **Student Ombudsman's Office**

The Office of the Student Ombudsmen 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](mailto: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 with no “W” notation and **still receive a tuition fee refund** is **January 17<sup>th</sup>, 2014**. Last day for registration/change of registration is **January 20<sup>th</sup>, 2014**. The last day to withdraw from this course is **April 14<sup>th</sup>, 2014**.