



**Department of Psychology**  
**Psychology 615(L01) – Advanced Research Design and Analysis I**  
**Fall 2009**

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<b>Instructor:</b>	C.T. (Chip) Scialfa	<b>Lecture Location:</b>	Admin. 253
<b>Phone:</b>	403-220-4951	<b>Lecture Days/Time:</b>	MW 10-11:15
<b>Email:</b>	<a href="mailto:Scialfa@ucalgary.ca">Scialfa@ucalgary.ca</a>	<b>[Lab and/or TA info in remaining cells</b>	Brenda Nguyen <a href="mailto:Brenda.nguyen@ucalgary.ca">Brenda.nguyen@ucalgary.ca</a>
<b>Office:</b>	Admin 151		Admin 141F
<b>Office Hours:</b>	MW 9 am		

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### **Course Description and Goals**

Applications of the general linear model to research design and analysis. Topics include analysis of variance, regression and analysis of covariance.

### **Prerequisites**

See me.

### **Required Text**

Maxwell, S.E. & Delaney, H.D. (2004). Designing experiments and analyzing data: A model comparison perspective, 2nd Ed. Mahwah, NJ: Lawrence Erlbaum Associates.

### **Evaluation**

There will be one mid-term and one final exam, specific dates to be decided after consulting with the class. The mid-term exam will be in class. The final exam will be over a 1-day (9 am to 5 pm period). They will each be a combination of true-false, short answer and computational questions. Each will count 33% of your final mark. The remainder of your final mark will come from the lab component. Students must achieve a passing grade on both the class and lab components to pass this course.

### **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

### Fall Session

Date	Topic/Activity/Readings/Due Date (revise and add columns as necessary)	Book Chapters	Notes	Assignment Due
	Lectures and Lab Topics			
Sept 8	Fall Session lectures begin Logic of Experimental Design	1,2	1,2	
Wed, Sept. 9	Logic of Experimental Design			
Fri, Sept. 11	LAB: SPSS Intro			
Mon, Sept. 14	Logic of Experimental Design	2,3	2, 3.1	
Wed, Sept. 16	Logic of Experimental Design			
Fri, Sept. 18	LAB: Data Coding and Descriptive Statistics			
Mon, Sept. 21	One-Way Between-Subjects Designs Last day for Fall registration and change of registration for Fall Session or full courses. No fee withdrawals after this date.	3	3.1, 3.2	
Wed, Sept. 23	One-Way Between-Subjects Designs	3	3.1, 3.2	
Fri, Sept. 25	LAB: Plotting Data			Data Coding and Descriptive Statistics
Mon, Sept. 28	One-Way Between-Subjects Designs			
Wed, Sept. 30	One-Way BS Designs	3	3.1, 3.2	
Fri, Oct. 2	LAB: One-way B/S ANOVA			Plotting Data
Mon, Oct. 5	Individual Means Comparisons	4	4	
Wed, Oct. 7	Multiple Comparisons	5	5	
Fri, Oct. 9	LAB: Orthogonality and Multiple Comparisons			One-way B/S ANOVA
Mon, Oct. 12	Thanksgiving Day. University closed.			
Wed. Oct. 14	Trend Analysis	6	6	
Fri, Oct. 16	LAB: Trend Analysis			Orthogonality and Multiple Comparisons
Mon, Oct. 19	Test 1 – Only Up To One-Way Designs	1-6		
Wed, Oct. 21	Two-Way Between-Subjects Designs	7	7.1, 7.2	
Fri, Oct. 23	LAB: 2 x 2 Factorial Design and Simple			Trend Analysis

	Effects			
Mon, Oct. 26	Two-Way Between Subjects Designs			
Wed, Oct. 28	Higher-Order BS Designs	8	8	
Fri, Oct. 30	LAB: Higher Order B/S Factorial Designs			2 x 2 Factorial Design and Simple Effects
Mon, Nov. 2	ANCOVA	9	9.1	
Wed., Nov. 4	ANCOVA	9	9.2	
Fri. Nov. 6	LAB: ANCOVA and ANCOHET			
Mon, Nov. 9	ANCOHET	9	9.2	
Wed, Nov. 11 – Sun., Nov. 15	Reading Days. No lectures.			
Fri, Nov. 13				ANCOVA and ANCOHET via email
Mon, Nov. 16	One-Way Within-Subjects Designs	11	10	
Wed. Nov. 18	One-Way and Higher-Order WS Designs	12	12	
Fri, Nov. 20	LAB: One-way W/S ANOVA			
Mon. Nov. 23	Higher-Order WS Designs	12	12	
Wed. Nov. 25	Higher-Order WS Designs	12	12	
Fri. Nov. 27	LAB: Higher Order W/S ANOVA – Univariate			One-way W/S ANOVA
Mon., Nov. 30	Log-linear Models	None	None	
Wed., Dec 2	Log-linear Models	None	None	
Fri, Dec. 4	LAB: LOGLINEAR (Not Marked)			Higher Order W/S ANOVA – Univariate
Mon., Dec 7	Review			
Tues, Dec. 8	Fall Session Lectures end. Last day to withdraw			
Dec 11-21	Final exams (scheduled with class)			
Dec 25-31	Holiday Observance. Session Break. University closed.			

### 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 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.

## **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 220-5567.

**Student Union VP Academic:** Phone: 220-3911 [suypaca@ucalgary.ca](mailto:suypaca@ucalgary.ca)  
**Student Union Faculty Rep.:** Phone: 220-3913 [socialscirep@su.ucalgary.ca](mailto:socialscirep@su.ucalgary.ca)

## **Important Dates**

The last day to drop this course and still receive a fee refund is **September 21, 2009**. The last day to withdraw from this course without academic penalty is **December 8, 2009**.