



PSYC 615 -01

Advanced Research Design & Analysis I

Fall 2013

|                      |                        |                           |                              |
|----------------------|------------------------|---------------------------|------------------------------|
| <b>Instructor:</b>   | Charles (Chip) Scialfa | <b>Lecture Location:</b>  | A247B                        |
| <b>Phone:</b>        | 403-220-1951           | <b>Lecture Days/Time:</b> | MW 9:00-10:15<br>F 2:00-4:50 |
| <b>Email:</b>        |                        |                           | TA and Place TBA             |
| <b>Office:</b>       | A237                   |                           |                              |
| <b>Office Hours:</b> | TBA                    |                           |                              |

### 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.

### 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, the date of the final 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.

### Lab Assignments

During the semester you will receive 9 laboratory assignments. Your final grade will be a composite score out of 80 with all assignments equally weighted but the lowest score dropped. The lab mark will constitute the remaining 34% of your course mark.

All assignments should be handed in on or before the due date, either during the scheduled lab session or at the Psychology Department Main Office (A275) before 4:30 pm on the due date. Make sure that your TA's name is clearly written on your assignment so it can be placed in the correct mailbox. Please note: **Late assignments will not be marked.**

### 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%  |

Because both the mid-term and the final exam may be “curved”, the assignment of grades for both will be carried out as follows: The percentage distribution of grades for each will be determined. Letter grades will be assigned to percentages after examining that distribution and will be no more demanding than that shown above. These letter grades will be converted to a 4-point system (e.g., A = 4, B = 3, etc). The same will be done for the lab component. The final mark will be determined as the weighted average of these “point scores”.

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 letter 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-).

| Date     | Topic/Activity/Readings/Due Date  | Chapter                                | Lecture Notes |
|----------|---|--|---------------|
| M Sep 9  | Fall Session lectures begin<br>Logic of Experimental Design   | 1,2                                    | 1,2           |
| W Sep 11 | Logic of Experimental Design  |  |               |
| F Sep 13 | <b>Lab 1 - SPSS Intro: Data Coding and Descriptive Stats</b>  | Assignment due:<br><b>September 20</b> |               |
| M Sep 16 | Logic of Experimental Design  | 2                                      | 2             |
| W Sep 18 | One-Way Between-Subjects Designs  | 3                                      | 3.1-3.3       |
| F Sep 20 | <b>Lab 2– Plotting Data</b><br>Last day to drop full courses and Fall Term half courses. No refunds for full courses (Multi-Term) or Fall Term half courses after this date | Assignment due:<br><b>September 27</b> |               |
| M Sep 23 | One-Way Between-Subjects Designs<br>Last day for registration/change of   |  |               |

|          |  |                                       |         |
|----------|--|---------------------------------------|---------|
|          | registration.  |                                       |         |
| W Sep 25 | One-Way Between-Subjects Designs                       |                                       |         |
| F Sep 27 | <b>Lab 3 - One-way B/S ANOVA</b>                       | Assignment due:<br><b>October 4</b>   |         |
| M Sep 30 | One-Way Between-Subjects Designs                       |                                       |         |
| W Oct 2  | Individual Means Comparisons                           | 4                                     | 4       |
| F Oct 4  | <b>Lab 4 - Orthogonality and Multiple Comparisons</b>  | Assignment due:<br><b>October 18</b>  |         |
| M Oct 7  | Individual Means Comparisons                           |                                       |         |
| W Oct 9  | Multiple Comparisons                                   | 5                                     | 5       |
| F Oct 11 | <b>NO LAB</b>  |                                       |         |
| M Oct 14 | Thanksgiving Day. No lecture.                          |                                       |         |
| W Oct 16 | Trend Analysis   | 6                                     | 6       |
| F Oct 18 | <b>Lab 5- Trend Analysis</b>                           | Assignment due:<br><b>October 25</b>  |         |
| M Oct 21 | Two-Way Between-Subjects Designs                       | 7                                     | 7.1-7.2 |
| W Oct 23 | Two-Way Between-Subjects Designs                       |                                       |         |
| F Oct 25 | <b>LAB REVIEW</b>                                      | <b>No Assignment</b>                  |         |
| M Oct 28 | Test 1   | 1-7                                   | Test 7  |
| W Oct 30 | Higher-Order BS Designs                                | 8                                     | 8       |
| F Nov 1  | <b>Lab 6 – Factorial BS Designs and Simple Effects</b> | Assignment due:<br><b>November 15</b> |         |
| M Nov 4  | Higher-Order BS Designs                                |                                       |         |
| W Nov 6  | ANCOVA   | 9                                     | 9.1-9.2 |

|          |   |                                       |    |
|----------|---|---------------------------------------|----|
| F Nov 8  | <b>NO LAB</b>   |                                       |    |
| M Nov 11 | Remembrance Day. No lecture.  |                                       |    |
| W Nov 13 | ANCOVA  |                                       |    |
| F Nov 15 | <b>Lab 7 - ANCOVA and ANCOHET</b>   | Assignment due:<br><b>November 22</b> |    |
| M Nov 18 | ANCOHET   |                                       |    |
| W Nov 20 | One-Way Within-Subjects Designs   | 11                                    | 10 |
| F Nov 22 | <b>Lab 8 - One-way WS ANOVA</b>   | Assignment due:<br><b>November 29</b> |    |
| M Nov 25 | One-Way and Higher-Order WS Designs   | 12                                    | 12 |
| W Nov 27 | Higher-Order WS Designs   |                                       |    |
| F Nov 29 | <b>Lab 9 - Higher Order WS ANOVA – Univariate</b>                                   | Assignment due:<br><b>December 6</b>  |    |
| M Dec 2  | Higher-Order WS Designs   |                                       |    |
| W Dec 4  | Review  |                                       |    |
| F Dec 6  | <b>Lab - Question and answer session</b><br><br>Lecture ends. Last day to withdraw. |                                       |    |
| Dec 9-19 | Final Exam to be Scheduled with Class   |                                       |    |

### 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 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](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 **September 20, 2013**. Last day for registration/change of registration is **September 23, 2013**. The last day to withdraw from this course is **December 6, 2013**.