

# PSYC\*2040, Course Outline: Winter 2017

## General Information

**Course Title:** Research Statistics

**Course Description:**

This course emphasizes inferential tests applied to psychological research, skills of data analysis, as well as the use and interpretation of output from statistical software. Topics covered include the t-test, various forms of analysis of variance, chi-square, bivariate and multiple regression.

**Credit Weight:** 0.50

**Academic Department (or campus):** Psychology

**Semester Offering:** W17

**Class Schedule and Location:** Mondays 7:00pm to 8:50pm, MACN 105

## Instructor Information

Instructor Name: David Stanley

Instructor Email: 2040guelph@gmail.com

Office location and office hours: See website [profile](#).

## GTA Information

| Lab Section | Lab Day | Lab Time | Office Hours Day | Office Hours Time | Office Hours Room | TA Name |
|-------------|---------|----------|------------------|-------------------|-------------------|---------|
| 0101        | Wed     | 12:30pm  | Monday           | 2:00pm – 3:00pm   | BW118             | Robert  |
| 0102        | Fri     | 12:30pm  | Thursday         | 1:30 – 2:30pm     | BW118             | Katie   |
| 0103        | Thurs   | 2:30pm   | Monday           | 4:00 – 5:00pm     | BW118             | Lara    |
| 0104        | Tues    | 9:30am   | Monday           | 3:00 – 4:00pm     | BW223             | Jessica |
| 0105        | Thurs   | 11:30am  | Wednesday        | 5:30 – 6:30pm     | BW211             | Larissa |
| 0106        | Fri     | 2:30pm   | Thursday         | 11:30 – 12:30     | BW111             | Scott   |
| 0107        | Wed     | 8:30am   | Monday           | 2:00pm – 3:00pm   | BW118             | Robert  |
| 0108        | Tues    | 3:30pm   | Monday           | 6:00 – 7:00       | BW118             | Kaytlin |

The only avenue for communicating with TAs is the lab or office hours (not email; due to contract restrictions) so please make sure you are available during your TA's office hours. When major lab assignments are due office hours will begin at the same time but be twice as long. This is to provide extra help with major assignments.

## **Course Content**

### **Specific Learning Outcomes:**

1. Understand and apply advanced concepts in statistics to data analysis in psychology.
2. Recognize and describe complex research methodologies.
3. Show an ability to analyze and interpret data to test a claim.
4. Demonstrate a skill set with statistical analysis software.
5. Evaluate the nature and extent of graphs needed to support analyses.
6. Write with appropriate vocabulary, APA style adherence, and few grammatical or functional errors.
7. Evaluate the graphs and or tables associated with analyses.

### **Lecture Content:**

1. *t-test*
2. *1-way ANOVA*
3. *Completely randomized factorial (CRF) designs*
4. *Split-plot Part 1*
5. *Split-plot Part 2*
6. *Correlation and regression*
7. *Lab exam Q&A.*
8. *Multiple correlation and regression*
9. *Chi-square*

### **Labs:**

See table above.

## Course Assignments and Tests:

| Lecture Date | Lecture/Lab Topic   | Assignment Due in Lab  |
|--------------|---|--|
| Jan. 9       | Introduction  |  |
| Jan. 16      | t-test  |  |
| Jan. 23      | 1-way ANOVA   | t-test (minor: 2.5%)   |
| Feb. 6       | Completely randomized factorial (CRF) designs   | 1-way ANOVA (major: 10%)<br>Extended TA Office Hours         |
| Feb 13       | Split-plot Part 1   | CRF (minor: 2.5%)  |
| Feb 27       | Split-plot Part 2   |  |
| Mar. 6       | Lab exam Q&A.<br>Lab exam during labs this week.<br>Lab exam covers everything up to and including CRF. | LAB EXAM (25%)   |
| Mar. 13      | Correlation and regression  | Split-plot (major: 10%)<br>Extended TA Office Hours          |
| Mar. 20      | Multiple correlation and regression   | Correlation-regression (minor: 2.5%)                         |
| Mar. 27      | Chi-square, Final Lecture Topic   | Multiple regression (major: 10%)<br>Extended TA Office Hours |
| April 3      | Check Lab Exam Marking  | Chi-square (minor: 2.5%)                                     |

### Additional Notes (if required):

*All learning outcomes are involved in every assignment and exam.*

*Summary:*

*Minor lab assignments: 10%*

*Major lab assignments: 30%*

*Lab Exam: 25%*

**Final examination date and time:** Tues 11:30AM - 01:30PM (2017/04/18)

**Final exam weighting:** 35%

## **Course Resources**

### **Required Texts:**

Gardner, R. C. & Tremblay, P.F. (2006). Essentials of Data Analysis: Statistics and Computer Applications.

APA Style Manual: Publication Manual of the American Psychological Association, Sixth Edition.

### **Other Resources:**

SPSS: Available for free in MCKN 028 and on library computer terminals. Also, you just “purchase” it for free from [On the Hub](#). Just be sure to use the “Institutional Use Only” tab at the top of the screen.

## **Course Policies**

### **Grading Policies**

All lab assignments (minor and major) are due during the lab for which a student is registered. All assignments must be handed in during the first 30 minutes of the lab. Assignments handed in later than this are considered late.

**Major assignment late penalty: 20% per day.** Weekends count as two days. You may email an assignment to the instructor (2040guelph@gmail.com) if you can't make it to the lab on time. However, you must still hand in a paper copy as soon as possible. The paper copy will be the one that is marked. The email submission merely confirms the assignment was completed on time. A short extension maybe granted on major assignments for compassionate or medical reasons, with documentation.

**Minor assignment late penalty: Late minor assignments receive a grade of 0.**

There will be no make-up lab exams or major assignments for any reason. Also, there will be no advance writing of tests or lab tests for any reason. If you miss the lab exam (or a major assignment) for a valid and documented reason (e.g., illness documented by a medical note), your absence will not be counted against you and your final mark in the course will be pro-rated toward your final exam. For example, if you miss the lab exam (worth 25% of your final grade) the final exam will be worth 60% (35% original final exam value + 25% representing missed lab exam value) of your final grade (assuming you provided valid medical documentation). For students who write the lab exam while sick -- requests to re-weight the lab exam due to a poor grade will not be considered. Be sure to inform the instructor prior to lab

exam, etc. that you cannot attend for accommodation. If you cannot provide valid documentation for missing a lab exam, you will be assigned a grade of zero.

Students are entitled to a rescheduling of final exams for legitimate medical or compassionate reasons. However, it is the student's responsibility to inform the instructor and registrar's office prior to the exam to arrange a timely makeup, and, if requested, to provide acceptable documentation to support a medical or compassionate claim. In general, retroactive requests for grade revisions on medical or compassionate grounds will not be considered.

### [Undergraduate Grading Procedures](#)

#### **Course Policy on Group Work:**

Lab assignments must be completed on an individual basis. Collaborations among students for the purposes of writing assignments are prohibited. Any student(s) suspected of unauthorized collaboration will be reported to the Dean's Office for an academic misconduct investigation (see Policy on Cheating & Academic Misconduct below). Note: It is possible to talk to fellow students to understanding the material needed to complete an assignment; however, you must write the assignment independently.

#### **Course Policy regarding use of electronic devices and recording of lectures:**

Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

## **University Policies**

### **Academic Consideration**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for

Academic Consideration:

[Academic Consideration, Appeals and Petitions](#)

## **Academic Misconduct**

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

[Academic Misconduct Policy](#)

## **Accessibility**

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibility Services (SAS) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email [csd@uoguelph.ca](mailto:csd@uoguelph.ca) or see the website: [Student Accessibility Services Website](#)

## **Course Evaluation Information**

Please refer to the [Course and Instructor Evaluation Website](#) .

## **Drop date**

The last date to drop one-semester courses, without academic penalty, is March 10, 2017. For regulations and procedures for Dropping Courses, see the Academic Calendar:

[Current Undergraduate Calendar](#)