**Faculty of Health**
**Department of Psychology**
**PSYC 3031 3.0 A: INTERMEDIATE STATISTICS LABORATORY**
**Wednesday/2:30pm-5:30pm/DB 2114 & DB 2116**
**Fall/2019**

**Instructor and T.A. Information**
Instructor: Monique Herbert, PhD
Office: 332 BSB
Office Phone: 416-736-2100 x 77186
Office Hours: In-class and by appointment
Email: herbertm@yorku.ca (when sending an email please include PSYC3031A in the subject box and your full name and student number in the signature of the message)

| T.A. | Mark Adkins |
|---|---|
| Email | madkins@yorku.ca |
| Office | 051 BSB |
| Office Hours | By appointment only |

**Course Prerequisite(s): Course prerequisites are strictly enforced**

- HH/PSYC 1010 6.00 (Introduction to Psychology), with a minimum grade of C.
- HH/PSYC 2020 6.00 (Statistical Methods I and II) or substitute
- Completed at least 54 earned credits

**Course Credit Exclusions**

Please refer to York Courses Website for a listing of any course credit exclusions.

**Course website:** Moodle

**Course Description**

This course provides students with the opportunity to apply, consolidate, and extend their statistical analysis skills to realistic psychological data using methods such as regression analysis. An important component of the course is the use of a statistical software package such as R, SPSS or SAS to prepare students for independent thesis research.

**Program Learning Outcomes**

Upon completion of this course, students should be able to:

1. Analyse psychological data using advanced univariate statistics.
2. Use data analytic software for analysis of psychological data.

**Specific Learning Objectives**

- Demonstrate a deeper understanding  of the statistical concepts reviewed and extended in this course.

- Identify appropriate statistical analysis(es) to address specific research question(s) and/or hypotheses.
- Identify and apply appropriate data management procedures to psychological data.
- Apply appropriate statistical analysis(es) to psychological data.
- Use statistical software for data management, exploration, and analysis of psychological data.
- Interpret and report the results of statistical analyses in APA format.

**Required Text**

There is no required text for this course, all course materials will be provided. However, there are some recommended text/resources below that you can consult as we progress through the course.

**Recommended Text/Resources**

**Text (Online and Hard copy)**

Navarro, D. J. (2016). *Learning statistics with R: A tutorial for psychology students and other beginners (Version 0.6)*. Retrieved from https://learningstatisticswithr.com/

Wickham's and Grolemund's R for Data Science https://r4ds.had.co.nz/

R Graphics Cookbook - http://www.cookbook-r.com/

Steve Nydick's *Introduction to R for Psychologists*

APA (2016). *Publication manual of the American Psychological Association*. Washington, DC: American Psychological Association.

Nicol, A. A. M., & Pexman, P. M. (2010). *Presenting your findings: A practical guide for creating tables*. Washington, DC: American Psychological Association.

Osborne, J. W. (2012). *Best practices in data cleaning*. Los Angeles, CA: Sage Publications Inc.

**Online Resources**

RTips - http://pj.freefaculty.org/R/statsRus.html

R Cheatsheets - https://www.rstudio.com/resources/cheatsheets/

Choosing appropriate plots and example R code - https://www.data-to-viz.com/

Quick R - http://www.statmethods.net/index.html

R bootcamp - https://www.jaredknowles.com/r-bootcamp/

Searching for R help made easy - https://www.rdocumentation.org/

Visualization and analyses with ggstatplot - https://github.com/IndrajeetPatil/ggstatsplot

## Course Requirements and Assessment:

| Assessment | Date of Evaluation (if known) | Weighting |
|---|---|---|
| Test 1 | Oct 09 | 20% |
| Test 2 | Nov 20 | 20% |
| Assignment 1 | Oct 23 | 30% |
| Assignment 2 | Dec 04 | 30% |
| Total | | 100% |

## Description of Assignments

**Assignments:** Assignments will provide students with the opportunity to apply the statistical concepts to realistic psychological data. Assignments provide you with hands-on opportunity to run statistical analyses, interpret, and present statistical findings to various audiences. More information on each assignment will be provided as the course progresses.

**Tests:** Tests will be non-cumulative and cover the material from lectures and readings. The format of the tests will be a mix of multiple-choice and open-ended/short-answer questions (e.g., defining concepts, responses to analysis questions, software output or code).

**Note: You will receive each assignment well in advance of the due date. You should use the assignment to review and apply your understanding of the material and prepare for test. I strongly encourage you to start your assignments as early as possible.**

## Grading as per Senate Policy

The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (e.g., A+ = 9, A = 8, B+ = 7, C+ = 5, etc.). Assignments and tests* will bear either a letter grade designation or a corresponding number grade (e.g. A+ = 90 to 100, A = 80 to 89, B+ = 75 to 79, etc.)

For a full description of York grading system see the York University Undergraduate Calendar - Grading Scheme for 2019-20

## Missed Tests/Midterm Exams/Late Assignment:

For any missed tests, midterm exam or late assignments, students MUST complete the following online form which will be received and reviewed in the Psychology undergraduate office.

HH PSYC: Missed Tests/Exams Form. Failure to complete the form within 48 hours of the original deadline will result in a grade of zero for the missed tests, midterm exam or late assignments.

In addition, to the online form, students documented reason for a missed tests, midterm exam or late assignments such as illness, compassionate grounds, etc., MUST submit official documentation (e.g. Attending Physician Statement)

**Missed Tests:** If you miss a test you will need to provide the following in order to have an opportunity to take a make-up test or receive an appropriate accommodation:*

   (a) An email to me ([herbertm@yorku.ca](mailto:herbertm@yorku.ca)) within 48 hours of the missed test outlining the circumstances for missing the test and
   (b) Formal documentation to verify the circumstances for missing the test (e.g., completed Attending Physician's Statement Form - http://registrar.yorku.ca/pdf/attending-physicians-statement.pdf)

**\*Failure to provide the email and appropriate documentation will result in a 0 for any missed tests.**

Upon receipt of the above documentation you will have **one opportunity** to take a make-up test (this will be scheduled at a day and time to be announced by the instructor/TA and may take a different form from the original test)**.**

**\*\*If you miss the make-up without a valid reason/documentation you will receive a 0 on the test.**

**Late Assigments:** Similar to your tests you must have a valid reason for missing the scheduled due date for your assignment. You will need to complete the missed test form (see link above) within 48 hours if your assignment will not or has not been be submitted on the scheduled due date. It is up to the course instructor to determine how much additional time, if any, you will be allowed to complete and submit the assignment.

**Add/Drop Deadlines**

For a list of all important dates please refer to: [Fall/Winter 2019-20 - Important Dates](#)

|  | **FALL (F)** | **YEAR (Y)** | **WINTER (W)** |
|---|---|---|---|
| Last date to add a course **without permission** of instructor (also see Financial Deadlines) | Sept. 17 | Sept. 17 | Jan. 19 |
| Last date to add a course **with permission** of instructor (also see Financial Deadlines) | Oct. 1 | Oct. 22 | Feb. 3 |
| Drop deadline: Last date to drop a course without receiving a grade (also see Financial Deadlines) | Nov. 8 | Feb. 3 | March 13 |
| Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript – see note below) | Nov. 9 - Dec. 3 | Feb. 4 - Apr. 5 | March 14 - Apr. 5 |

**\*Note**: *You may withdraw from a course using the registration and enrolment system after the drop deadline until the last day of class for the term associated with the course. When you withdraw from a course, the course remains on your transcript without a grade and is notated as "W". The withdrawal will not affect your grade point average or count towards the credits required for your degree.*

**Information on Plagiarism Detection**

Turnitin will be used to detect any evidence of plagiarism.

**Electronic Device Policy**

Students who wish to use an electronic device (e.g., tablets, laptops) during class time are asked to do so only for course-related purposes.
See also policy on use of electronic mobile devices during tests and exams.

**Attendance Policy**

Students are expected to attend all classes as weekly class activities builds on the previous week's material.

**Academic Integrity for Students**

York University takes academic integrity very seriously; please familiarize yourself with Information about the Senate Policy on Academic Honesty.

It is recommended that you review Academic Integrity information SPARK Academic Integrity modules. These modules explain principles of academic honesty.

**Test Banks**

The offering for sale of, buying of, and attempting to sell or buy test banks (banks of test questions and/or answers), or any course specific test questions/answers is not permitted in the Faculty of Health. Any student found to be doing this may be considered to have breached the Senate Policy on Academic Honesty. In particular, buying and attempting to sell banks of test questions and/or answers may be considered as "Cheating in an attempt to gain an improper advantage in an academic evaluation" (article 2.1.1 from the Senate Policy) and/or "encouraging, enabling or causing others" (article 2.1.10 from the Senate Policy) to cheat.

**Electronic Devices During a Test/Examination**

Electronic mobile devices of any kind are not allowed during a test or examination. Students are required to turn off and secure any electronic mobile device in their bag which is to be placed under the chair while a test/exam is in progress. Any student observed with an electronic device during a test/exam may be reported to the Undergraduate Office for a potential breach of Academic Honesty.

**Academic Accommodation for Students with Disabilities**

While all individuals are expected to satisfy the requirements of their program of study and to aspire to do so at a level of excellence, the university recognizes that persons with disabilities may require reasonable accommodation to enable them to do so.  The university encourages students with disabilities to register with *Student Accessibility Services (SAS)* to discuss their accommodation needs as early as possible in the term to establish the recommended academic accommodations that will be communicated to Course Directors as necessary.  **Please let me know as early as possible in the term if**

**you anticipate requiring academic accommodation so that we can discuss how to consider your accommodation needs within the context of this course.**

https://accessibility.students.yorku.ca/

**Excerpt from Senate Policy on Academic Accommodation for Students with Disabilities**:

1.  Pursuant to its commitment to sustaining an inclusive, equitable community in which all members are treated with respect and dignity, and consistent with applicable accessibility legislation, York University shall make reasonable and appropriate accommodations in order to promote the ability of students with disabilities to fulfill the academic requirements of their programs. This policy aims to eliminate systemic barriers to participation in academic activities by students with disabilities.

All students are expected to satisfy the essential learning outcomes of courses. Accommodations shall be consistent with, support and preserve the academic integrity of the curriculum and the academic standards of courses and programs. For further information please refer to: York University Academic Accommodation for Students with Disabilities Policy.

**Course Materials Copyright Information**

These course materials are designed for use as part of the PSYC3031A course at York University and are the property of the instructor unless otherwise stated. Third party copyrighted materials (such as book chapters, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law.

Copying this material for distribution (e.g. uploading material to a commercial third-party website) may lead to a violation of Copyright law. Intellectual Property Rights Statement.

**Course Schedule**

| Week | Date | Topic | Classroom |
|---|---|---|---|
| 1 | Sep 04 | *Course Introduction*<br><br>*Introduction to R and RStudio* | DB2114/2116 |
| 2 | Sep 11 | *Introduction to R and RStudio* | DB2114/2116 |
| 3 | Sep 18 | *Descriptive Statistics* | DB2114/2116 |
| 4 | Sep 25 | *Comparing two means (t-tests)* | DB2114/2116 |
| 5 | Oct 02 | *One-way independent groups ANOVA (including posthoc)* | DB2114/2116 |
| 6 | Oct 09 | **Test 1 (20%)** | DB2114/2116 |
|  | Oct 16 | **Reading Week – NO CLASS** |  |
| 7 | Oct 23 | *Two-way independent groups ANOVA (including posthoc)*<br><br>**Assignment#1 due (30%)** | DB2114/2116 |
| 8 | Oct 30 | *One-way repeated measures ANOVA (including posthoc)* | DB2114/2116 |
| 9 | Nov 06 | *Review of correlation*<br><br>*Simple linear regression* | DB2114/2116 |
|  | **Nov 08** | **Last date to drop course without receiving a grade** |  |
| 10 | Nov 13 | *Mutiple linear regression* | DB2114/2116 |
| 11 | Nov 20 | **Test#2 (20%)** | DB2114/2116 |
| 12 | Nov 27 | *Course wrap-up* | DB2114/2116 |
|  | Dec 04 | **Assignment#2 due (30%)** |  |