

## **Psychology 3830F/G – Computers and Research in Psychology**

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### **1.0 Course Information**

#### **1.1 General Information**

**Course Number:** Psychology 3830F

**Section:** 550

**Course Name:** Computers and Research in Psychology

**Scheduled Class Day & Time:** Mondays 12:30pm–2:30pm & Wednesdays 1:30pm–2:30pm

**Class Location:** H112

**Course website:** <https://owl.uwo.ca/> {login & password = UWO login ID and password}

**Delivery:** in-person

#### **1.2 Instructor Information**

**Name:** Dr. Ana C. Ruiz Pardo (she/her)

**Contact Information:** [aruizpar@uwo.ca](mailto:aruizpar@uwo.ca)

Please contact me through email anytime (please include the class course number in the Subject line). If possible, responses will be returned within 24 hours (Monday to Friday, 9am to 5pm).

**Office Hours:** Wednesdays 11:30am–1:30pm.

Please email ahead of time if you plan to attend either in-person or via Zoom.

**Office Location:** V105

### **2.0 Course Description**

Topics include: fundamentals of operating microcomputers, use of statistical packages (e.g., SPSS/PC+), interpretation of computer output from univariate and multivariate statistical analyses.

#### **2.1 Antirequisite(s)**

Psychology 3800F/G or the former Psychology 381E.

#### **2.2 Prerequisite(s)**

Psychology 2830A and registration in an Honours Specialization or Major in Psychology or permission of the Department.

#### **2.3 Course Operation**

This is an in-person course with two components:

1. Lectures designed to help students understand the rationale behind statistical procedures, including in-class activities with computer software (e.g., SPSS, JASP).
2. Hands-on computer analysis sessions (labs) to help provide practice with application of knowledge of statistical procedures. Labs will prepare students for weekly assessments (i.e., either a quiz or an assignment) and for the final lab report.

Each week, a lecture with that week's topic will be covered, followed by a lab session. Each lecture/lab has a corresponding chapter in the optional textbook and slides (available on OWL). All lab sessions will include a short assignment or quiz (see [Section 6.0](#) for schedule). You are expected to (1) come to class with lecture notes printed in hardcopy or open on your computer to follow along and take notes, and (2)

participate fully in activities. You can take notes by hand or on a laptop. The topics can be found on the left menu bar on OWL. Click on a topic, open the topic page and you will find:

- The assigned readings in the text
- Additional reading as needed
- Learning outcomes for the topic
- PowerPoint slides

## **2.4 Copyright and Intellectual Property**

PowerPoint lecture slides and notes, lists of readings, in-class activities, assignment guidelines, and other components of the course materials are typically the intellectual property of the instructor. Unauthorized reproduction through audio-recording, videorecording, photographing, sharing on social media, or posting on course-sharing websites is an infringement of copyright and is prohibited. Such action may be considered a Code of Conduct violation and lead to sanctions.

## **2.5 Course Calendar**

You can subscribe to the Course Outlook calendar using the ICS link, or the html to view the calendar in your browser. The calendar can be added to your own Outlook / Google / Apple calendar and will updated weekly. All assignments, readings, and deadlines will be listed here.

- ICS link, to subscribe to the calendar:  
<https://outlook.office365.com/owa/calendar/ac08b092bd9c4625970ca50e59f0e63b@uwo.ca/f0b082612fae464081ed6c62f1388bcc8412641341470050342/calendar.ics>
- HTML link, to view the calendar in-browser:  
<https://outlook.office365.com/owa/calendar/ac08b092bd9c4625970ca50e59f0e63b@uwo.ca/f0b082612fae464081ed6c62f1388bcc8412641341470050342/calendar.html>

## **3.0 Course Learning Outcomes**

By the end of this course, students should be able to:

- The assigned readings in the text
- Determine the appropriate statistical test for various types of data in psychology
- Conduct a variety of statistical tests using computer software
- Interpret the output of statistical tests conducted with computer software
- Write an APA-style results section reporting the outcomes of common statistical tests
- Design and conduct an empirical research study

## **4.0 Course Materials (Textbook & Software)**

The texts are here to support your understanding of the different analyses we will cover with additional information, should you need it. Some people will find them helpful and others less so. Important concepts will be covered in lecture and lab, so I consider these texts secondary to our in-class work.

You will need to download the statistical software packages for the course: SPSS & JASP. SPSS can be bought or accessed for free via MyVlab at UWO (see [Section 4.1](#)). JASP is free to download (see [Section 4.2](#)).

### **4.1 SPSS**

The text is available at the university bookstore. If you do not wish to buy the text, it is available at the library as an e-book. This text is highly recommended for anyone who likes a funny stats book (yes, really) and who may be a bit nervous about stats or feel they would like additional background on the analyses we will cover. Also, students who plan to go on to graduate school of any kind are encouraged to own a copy. The text is also available for purchase from online sellers such as amazon.ca and chapters.ca.

- A Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics, North American edition (5th ed)*. Sage: London.
  - Text Associated SAGE Edge web site: <https://edge.sagepub.com/field5e/student-resources/resources-by-type>

A license for SPSS software can be purchased to use on your own laptop:  
<https://computerstore.uwo.ca/product/spss25lic>

- SPSS can also be accessed for free via MyVLab at UWO, although some students find it slow. Accessing MyVLab takes a little bit of setup on your laptop:  
[https://myvlab.uwo.ca/setup\\_instructions/index.html](https://myvlab.uwo.ca/setup_instructions/index.html)

## 4.2 JASP

The JASP text is available at <https://learnstatswithjasp.com/>

- Navarro DJ, Foxcroft DR, Faulkenberry TJ. (2019). *Learning statistics with JASP: A tutorial for psychology students and other beginners*.

JASP software is free to download at: <https://jasp-stats.org/download/>

## 4.3 Excel

You should also have Microsoft Excel installed from the UWO Microsoft 365 Office package site (free for students): <https://wts.uwo.ca/sitelicense/microsoft/homeuse.html>

## 4.4 APA Publication Manual 7<sup>th</sup> Edition

You will need to use APA formatting for your lab assignments—you must use the 7th edition. A copy is available in the library. Limited information is available on the American Psychological Association's website ([www.apastyle.org](http://www.apastyle.org)) and Purdue University web site ([https://owl.purdue.edu/owl/research\\_and\\_citation/apa\\_style/apa\\_formatting\\_and\\_style\\_guide/general\\_for\\_mat.html](https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_for_mat.html)).

# 5.0 Methods of Evaluation

## 5.1 Evaluation Breakdown

The final grade will be calculated according to the components shown in the breakdown. No grades will be rounded.

Component	Breakdown
Quizzes (4)	8%
Assignments (4)	32%
Lab Report	
Hypothesis	5%
Data Analysis Plan	5%
Final Paper	20%
Final Exam	30%

## 5.2 Quizzes

There are 4 quizzes. They will ask knowledge and application questions based on the week's content and will consist of short answer and multiple-choice questions. Each quiz is scheduled to take place in-person during a class meeting time (see [Section 6.0](#)). Each quiz is worth 2% of your final grade, which make up 8% of your final grade. Details for all quizzes will be discussed during class.

## 5.3 Assignments

There are 4 assignments. They will involve the analysis of data using computer software. They may also involve summarizing the material, generating questions, and critical thought exercises. Each assignment

is worth 8% of your final grade, which make up 32% of your final grade. Details for all assignments will be discussed during class (see [Section 6.0](#) for the assignment schedule).

#### **5.4 Lab Report**

There is a lab report project with three components: (1) a hypothesis, (2) a data analysis plan, and (3) the final paper. It will require individualized analysis of a data set and will be written up in an APA-style report. The lab report is worth 30% of your final grade. More details will be made available at the start of class.

#### **5.5 Exam**

There is one exam in the course. It will be held during the December exam period. It will consist of short answer, multiple-choice, and short essay items based on conceptual information from the course, computer software outputs and datasets, and research scenarios. The final exam is worth 30% of your final grade.

#### **5.6 Deadlines**

Assignments will be assigned at the end of their respective lab day. Completed assignments must be uploaded to OWL and are due on OWL (in Word format) the following lecture before the start of class (i.e., Mondays). All assignments and lab report components will be checked for plagiarism using TurnItIn (automatically done via OWL submission).

Please allow ample time for your submission—this means that you should avoid submitting your work last minute. The TurnItIn report can sometimes take a while to generate, so submit your paper as early as possible. If you are having issues with your submission, you must contact your instructor BEFORE the deadline. Do NOT submit your paper as an email attachment to the instructor and expect to use that as a record of when you submitted your paper as the submission will not contain a TurnItIn report.

Late assignments will be subject to a 10% per 24-hour penalty, starting at the due date. Work will not be accepted later than 10 days after the initial due date (i.e., mark will be 0). See [Section 5.8](#) for Academic Accommodation information.

#### **5.7 Grades in Psychology at Huron University College**

Students at Huron University College should consider a grade in the range from 75-79 to be evidence of satisfactory performance in a 3000-level Psychology course. Grades in the A (80-90%) range will only be awarded for performance that is demonstrably superior to the third or fourth-year standard associated with the Major or Minor modules. A grade of A+ (90-100%) will only be awarded rarely and only for work that is exceptional.

#### **5.8 Academic Accommodation in Psychology at Huron University College**

In the Department of Psychology at Huron, courses are structured to allow students as much flexibility as possible. In the event of an acute medical illness or other personal emergency, students must request academic consideration as per Western Academic Senate Policy. The instructor must indicate on the course outline how accommodations are granted and arranged.

Student requests for academic consideration/accommodation for missed work must be submitted in a timely manner, typically no more than 48 hours after the missed evaluation. Requests submitted more than 48 hours after the missed evaluation will normally require a formal recommendation from an Academic Advisor.

For missed coursework worth **less than 10% of the overall grade** in a course, students should contact the **instructor** in writing as soon as possible to arrange for accommodation. In cases where accommodation is granted, the instructor will inform the student in writing what accommodation will be granted (e.g., makeup test, reweighting missed evaluation, accept late assignment).

For missed coursework worth **10% or more of the overall grade** in a course, students must contact their home faculty **Academic Advising office** with appropriate documentation (at Huron, this is Huron's

Academic Advising Office; if you are a student at a difference campus, contact your academic advisor at your home campus).

In the Department of Psychology, if accommodation is granted, students will typically be granted an extension of 48 hours for written essays and reports from the time when accommodation is granted in writing, unless otherwise discussed with the course instructor. The typical accommodation for missed tests will be reweighting of the course grade, unless otherwise discussed with the course instructor. Instructors may request further documentation to approve accommodations.

Students should refer to the following for more information regarding academic consideration and accommodation:

- Western Senate Policy regarding Accommodation for Medical Illness  
[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_medical.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf)
- Huron Academic Advising  
<https://huronatwestern.ca/student-life/student-services/academic-advising/faq/>

## 6.0 Tentative Class & Assessment Schedule

Topics will be covered in the order listed and any dates listed are meant as a guideline.

Unit	Date	Topic	Chapter	Assessments	Date
1	Sep 12, 14	Introduction & Basic Concepts	--	A01: Correlation & Linear Regression	Sep 26
2	Sep 19, 21	Correlation, Linear Regression	8, 9	LR01: Hypothesis	Sep 28
3	Sep 26, 28	Multiple Regression	9	Q01: Multiple Regression	Oct 5
4	Oct 3, 5	t-Tests	10	A02: t-Tests	Oct 10
5	Oct 10, 12	One-way & Two-way ANOVA	12, 19	A03: One-way ANOVA	Oct 17
6	Oct 17, 19	Repeated ANOVA	15	Q02: Repeated ANOVA	Oct 26
--	Oct 24, 26	Writing Workshop	--	LR02: Data Analysis Plan	Nov 9
--	Oct 31-Nov 6	-- Reading week --	--	A04: Mixed ANOVA	Nov 14
7	Nov 7, 9	Mixed ANOVA	16	Q03: Factor Analysis	Nov 28
--	Nov 14, 16	Writing Workshop	--	A04: Chi-Square	Dec 7
8	Nov 21, 23	Factor Analysis	18	LR03: Final Paper	Dec 8
9	Nov 28, 30	Chi-Square	19	Final Exam	TBD
--	Dec 5, 7	Writing Workshop & Review	--		

## 7.0 FASS Appendix



### Appendix to Course Outlines: Academic Policies & Regulations Fall/Winter 2022

#### 1) **Pandemic Contingency**

Huron will continue to follow the guidance of public health and government officials. It is anticipated that there will be no further disruptions to in-person instruction. This is subject to change.

#### 2) **Student Code of Conduct**

Membership in the community of Huron University College and Western University implies

acceptance by every student of the principle of respect for the rights, responsibilities, dignity and well-being of others and a readiness to support an environment conducive to the intellectual and personal growth of all who study, work and live within it. Upon registration, students assume the responsibilities that such registration entails. While in the physical or online classroom, students are expected to behave in a manner that supports the learning environment of others. Please review the Student Code of Conduct at:

<https://huronatwestern.ca/sites/default/files/Res%20Life/Student%20Code%20of%20Conduct%20-%20Revised%20September%202019.pdf>.

3) **Prerequisite and Antirequisite Information**

Students are responsible for ensuring that they have successfully completed all course prerequisites and that they have not completed any course antirequisites. Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

4) **Attendance Regulations for Examinations**

A student is entitled to be examined in courses in which registration is maintained, subject to the following limitations:

- 5) A student may be debarred from writing the final examination for failure to maintain satisfactory academic standing throughout the year.
- 6) Any student who, in the opinion of the instructor, is absent too frequently from class or laboratory periods in any course will be reported to the Dean of the Faculty offering the course (after due warning has been given). On the recommendation of the Department concerned, and with the permission of the Dean of that Faculty, the student will be debarred from taking the regular examination in the course. The Dean of the Faculty offering the course will communicate that decision to the Dean of the Faculty of registration.

Review the policy on Attendance Regulations for Examinations here: [Academic Calendar - Western University \(uwo.ca\)](#)

7) **Statement on Academic Offences**

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following website: [Academic Calendar - Western University \(uwo.ca\)](#). The appeals process is also outlined in this policy as well as more generally at the following website:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/appealsundergrad.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/appealsundergrad.pdf).

8) **Turnitin.com**

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

9) **Statement on Use of Electronic Devices**

It is not appropriate to use electronic devices (such as, but not limited to, laptops, tablets, cell phones) in the classroom for non-classroom activities. Such activity is disruptive and distracting to other students and to the instructor, and can inhibit learning. Students are expected to respect the classroom environment and to refrain from inappropriate use of technology and other electronic devices in class.

10) **Statement on Use of Personal Response Systems (“Clickers”)**

Personal Response Systems (“clickers”) may be used in some classes. If clickers are to be used in a class, it is the responsibility of the student to ensure that the device is activated and functional. Students must see their instructor if they have any concerns about whether the clicker is malfunctioning. Students must use only their own clicker. If clicker records are used to compute a portion of the course grade:

- the use of somebody else’s clicker in class constitutes a scholastic offence
- the possession of a clicker belonging to another student will be interpreted as an attempt to commit a scholastic offence.

11) **Academic Consideration for Missed Work**

All students pursuing academic consideration, regardless of type, must contact their instructors no less than 24 hours following the end of the period of absence to clarify how they will be expected to fulfill the academic responsibilities missed during their absence. **Students are reminded that they should consider carefully the implications of postponing tests or midterm exams or delaying submission of work, and are encouraged to make appropriate decisions based on their specific circumstances.**

Students who have conditions for which academic accommodation is appropriate, such as disabilities or ongoing or chronic health conditions, should work with Accessible Education Services to determine appropriate forms of accommodation. Further details concerning policies and procedures may be found at: <http://academicsupport.uwo.ca/>.

12) **Policy on Academic Consideration for a Medical/ Non-Medical Absence**

(a) **Consideration on Medical Grounds for assignments worth *less than 10%* of final grade: **Consult Instructor Directly and Contact Academic Advising****

When seeking consideration on **medical grounds** for assignments worth *less than 10%* of the final course grade, the student should contact the instructor directly. The student need only share broad outlines of the medical situation. The instructor **may** require the student to submit documentation to the academic advisors, in which case she or he will advise the student and inform the academic advisors to expect documentation. If documentation is requested, the student will need to complete and submit the [Student Medical Certificate](#). The instructor may not collect medical documentation. The advisors will contact the instructor when the medical documentation is received, and will outline the severity and duration of the medical challenge as expressed on the Student Medical Certificate and in any other supporting documentation. The student will be informed that the instructor has been notified of the presence of medical documentation, and will be instructed to work as quickly as possible with the instructor on an agreement for accommodation.

b) **Medical Grounds for assignments worth 10% or more of final grade: **Go Directly to Academic Advising****

University Senate policy, which can be found at [Academic Calendar - Western University \(uwo.ca\)](https://www.uwo.ca/academic_calendar/) requires that all student requests for accommodation on medical grounds for assignments worth 10% or more of the final grade be made directly to the academic advising office of the home faculty (for Huron students, the “home faculty” is Huron), with supporting documentation in the form (minimally) of the Senate-approved Student Medical Certificate found at: [https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf).

The documentation is submitted in confidence and will not be shown to instructors. The advisors will contact the instructor when the medical documentation is received, and will outline the severity and duration of the medical challenge as expressed on the Student Medical Certificate and in any other supporting documentation. The student will be informed that the instructor has been notified of the presence of medical documentation, and will be instructed to work as quickly as possible with the instructor on an agreement for accommodation. The instructor will not normally deny accommodation where appropriate medical documentation is in place and where the duration it describes aligns with the due date(s) of assignment(s). Before denying a request for accommodation on medical grounds, the instructor will consult with the Dean. The instructor’s decision is appealable to the Dean.

**c) Consideration on Non-Medical Grounds: Consult Huron Support Services/Academic Advising, or email [hurousss@uwo.ca](mailto:hurousss@uwo.ca).**

Students seeking academic consideration for a **non-medical** absence (e.g. varsity sports, religious, compassionate, or bereavement) will be required to provide appropriate documentation. All consideration requests must include a completed [Consideration Request Form](#). Late penalties may apply at the discretion of the instructor.

Please review the full policy on Academic Consideration for medical and non-medical absence at: [accommodation\\_medical.pdf \(uwo.ca\)](#). Consult [Huron Academic Advising](#) at [hurousss@uwo.ca](mailto:hurousss@uwo.ca) for any further questions or information.

**13) Support Services**

For advice on course selections, degree requirements, and for assistance with requests for medical accommodation, students should email an Academic Advisor in Huron’s Student Support Services at

[hurousss@uwo.ca](mailto:hurousss@uwo.ca). An outline of the range of services offered is found on the Huron website at: <https://huronatwestern.ca/student-life/student-services/>.

Department Chairs, Program Directors and Coordinators are also able to answer questions about individual programs. Contact information can be found on the Huron website at: <https://huronatwestern.ca/contact/faculty-staff-directory/>.

If you think that you are too far behind to catch up or that your workload is not manageable, you should consult your Academic Advisor. If you are considering reducing your workload by dropping one or more courses, this must be done by the appropriate deadlines. Please refer to the Advising website, <https://huronatwestern.ca/student-life/student-services/academic-advising/> or review the list of official Sessional Dates on the Academic Calendar, available here: <http://www.westerncalendar.uwo.ca/SessionalDates.cfm>.

You should consult with the course instructor and the Academic Advisor who can help you

consider alternatives to dropping one or more courses. Note that dropping a course may affect OSAP and/or Scholarship/Bursary eligibility.

Huron Student Support Services: <https://huronatwestern.ca/student-life/student-services/> Office of the Registrar: <https://registrar.uwo.ca/>  
Student Quick Reference Guide: <https://huronatwestern.ca/student-life/student-services/#1> Academic Support & Engagement: <http://academicsupport.uwo.ca/>  
Huron University College Student Council: <https://huronatwestern.ca/student-life/beyond-classroom/hucsc/>  
Western USC: <http://westernusc.ca/your-services/#studentservices>

14) **Wellness and Health Supports at Huron and Western**

University students may encounter setbacks from time to time that can impact academic performance. Huron offers a variety of services that are here to support your success and wellbeing. All Huron staff and faculty have received training on responding to disclosures of Gender-Based Sexual Violence (GBSV); students should know that the Community Safety Office is a resource for survivors, providing support and, if desired, guidance while referring them to the further supports that they may require. Please visit <https://huronatwestern.ca/student-life-campus/student-services/wellness-safety> for more information or contact staff directly:

Wellness Services:

[huronwellness@huron.uwo.ca](mailto:huronwellness@huron.uwo.ca) Community

Safety Office: [safety@huron.uwo.ca](mailto:safety@huron.uwo.ca)

Additional supports for Health and Wellness may be found and accessed at Western through, <https://www.uwo.ca/health/>.

Western Calendar - Policy Pages -

[Academic Calendar - Western University \(uwo.ca\)](#)