

**Psychological Statistics Using Computers**  
**Psychology 3800f-530**

**Fall 2018**

**Class Meetings**

Lecture + Lab: Mondays 9:30 AM – 12:30 PM, St. James Room 206 (computer lab)

**Course Instructor** Dr. Jennifer Sutton  
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*Office Hours:* TBA

**Materials**

- Any stats book that gives an introduction to the statistical techniques covered in the course is fine. One that does, and is on reserve at the Brescia library, is:

Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics, North American edition*. Sage: London.

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 she 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 available for purchase from online sellers such as amazon.ca and chapters.ca. While recommended, it is not strictly required for this course.

- Your Office 365 OneDrive account is an excellent place to store your files and is accessible through any web browser, including on the classroom computers.
- Lecture/lab slides, as well as handouts, videos, and web site links will be available on the Owl page associated with each week's topic

**Course Website**

Registered students will see the course listed on their Owl page.

**Course Description**

This course covers the most common statistical procedures used in psychological research, and the use and interpretation of SPSS for Windows. Topics covered include the *t* test, various forms of analysis of variance, bivariate and multiple regression and correlation, factor analysis, and multivariate analysis of variance.

**Prerequisites:** Both [Psychology 2850A/B](#) and [Psychology 2851A/B](#) and both [Psychology 2855F/G](#) and [Psychology 2856F/G](#) or [Psychology 2820E](#) or both [Psychology 2800E](#) and [Psychology 2810](#).

## Learning Objectives

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

- determine the appropriate statistical test for various types of data in psychology (*Brescia Competency: Problem Solving*)
- conduct a variety of statistical tests using SPSS software (*Brescia Competency: Inquiry and Analysis*)
- interpret the output of statistical tests conducted with SPSS (*Brescia Competency: Inquiry and Analysis*)
- write an APA-style results section reporting the outcomes of common statistical tests (*Brescia Competencies: Communication, Inquiry and Analysis*)

## Lectures and Lab meetings

Each week, the lecture and lab will run in adjacent time slots in the computer lab (room 206, St. James); after lecture we will have a short break and then start the lab.

## Basic needs

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Brescia Student Life Centre ([bucstudent.life@uwo.ca](mailto:bucstudent.life@uwo.ca)) for support. Furthermore, please notify me if you are comfortable in doing so. This will enable me to provide any resources that I can.

## Mental health resources

The Brescia Student Life Centre maintains a number of mental health resources you can access to get help for yourself or someone else. Wondering whether you should seek help for yourself? Read more here: <http://brescia.uwo.ca/life/mental-health-wellness/get-help/for-yourself/>. I can also help you find resources if you are comfortable speaking to me.

## Evaluation

Student evaluation will be based on:

- Results Reports** (2 reports x 15% each = 30%)
- Mini-Assignments** (2 x 5% each = 10%)
- Quizzes** (10 quizzes x 3% each = 30%)
- Final Exam** (30%)

**Results Reports:** You will be required to perform statistical tests using SPSS and write a Results-type section in APA format. You will also be required to submit your SPSS output. More information about the reports, including the procedures for peer review, will be available in class.

**Mini-Assignments:** There will be two assignments that will involve analyzing data in SPSS and answering specific questions about the analysis and/or the interpretation of the output.

**Quizzes:** Weekly in-class quizzes will be conducted beginning in the second week of class. The quizzes will be held at the very beginning of class and will cover the topics discussed in the previous class. Missed quizzes may not be made up; students who miss a quiz and provide documentation for accommodation through the academic advisor will have the remaining quizzes re-weighted. Students who miss a quiz and do not provide

documentation through the academic advisor will receive a zero for the quiz. Eleven quizzes will be conducted and your lowest quiz mark will be dropped for a total of 10 quizzes counting toward your final mark.

**Final Exam:** The final exam 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, SPSS outputs and datasets, and research scenarios.

### Deadlines

Results report assignments and mini-assignments will be available on the Owl site after our Monday meeting. Completed assignments must be uploaded to Owl and are due before class begins at 9:30. Late reports will be subject to a 10% per day penalty, starting at 9:30 am on the due date. Thus, a report uploaded on:

- the Monday due date anytime after 9:30 am: -10%
- the Tuesday following the due date (anytime): -20%
- the Wednesday following the due date (anytime): -30%
- the Thursday following the due date (anytime): -40%

\*\*Work will not be accepted later than Thursday following the due date (mark will be 0)

Late penalties for reports that include a peer review and revision component will work slightly differently. The initial report upload and the final revised upload will be subject to the same 10% per day penalty as above. Your peer reviews are time-sensitive and cannot be submitted late. In addition, your revision summary letter must be submitted with your revision. That is, if either/both of those components is not completed on time, the mark will be zero for that component.

Accommodation for late work, missing a quiz, or failure to complete the final exam in this course requires supporting documentation that is verified by an Academic Advisor. Please see the policy section below on academic accommodation for more information.

### LECTURE/LAB SCHEDULE – subject to change, see Owl and announcements in class for updates

Date	Topic <b>**Weekly quizzes begin Sept 17**</b>	Field Chapter (on reserve)	Assignment Due
Sept 10	Basic concepts review, problems with NHST, effect size	1 - 3	
Sept 17	Correlation	8	
Sept 24	Linear Regression	9	
Oct 1	Multiple Regression	9	
Oct 8	<b><i>Thanksgiving, no class today</i></b>		
Oct 15	<i>t</i> -test	10	Correl./Reg. Monday + peer review, revision
Oct 22	Oneway Analysis of Variance	12	

Oct 29	Completely Randomized Factorial Analysis of Variance	14	Mini-assignment #1 due
Nov 5	Repeated Measures Analysis of Variance	15	Mini-assignment #2 due
Nov 12	Mixed Analysis of Variance	16	
Nov 19	Multivariate Analysis of Variance	17	Mixed ANOVA Monday + peer review, revision
Nov 26	Factor Analysis (Principal Components Analysis)	18	
Dec 3	Review		
Finals Period	<b>Final Exam date TBA</b>		

⇒ **A note of caution:** Technical failure (e.g., my printer broke/is out of toner, my usb drive is lost/won't work, Word/SPSS/Excel/my laptop broke/exploded/is giving me the screen of death/was stolen out of my car, etc.) is not considered grounds for accommodation. **Develop the habits of 1) backing up your work frequently (even better: saving to the cloud on your OneDrive/Google Drive/Dropbox) and 2) not waiting until the last minute.** Your stress levels, and likely your marks, will thank you.

Please note that your final mark in this course is based exclusively on the assessments described here. Marks will not be adjusted based on requests, and students will not be given the opportunity to improve their marks by completing additional assignments. Also note that the make-up exam may consist, in part or exclusively, of essay, short-answer, and/or multiple-choice items.

## 2018-19 BRESCIA UNIVERSITY COLLEGE ACADEMIC POLICIES AND REGULATIONS

### 1. POLICY REGARDING MAKEUP EXAMS AND EXTENSIONS OF DEADLINES

When a student requests academic accommodation (e.g., extension of a deadline, a makeup exam) for work representing 10% or more of the student's overall grade in the course, it is the responsibility of the student to provide acceptable documentation to support a medical or compassionate claim. All such requests for academic accommodation **must** be made through an Academic Advisor and include supporting documentation.

Academic accommodation for illness will be granted only if the documentation indicates that the onset, duration and severity of the illness are such that the student could not reasonably be expected to complete her academic responsibilities. Minor ailments typically treated by over-the-counter medications will not normally be accommodated.

Students must submit their documentation along with a request for relief specifying the nature of the accommodation being requested no later than two business days after the date specified for resuming responsibilities. In cases where there might be an extended absence or serious issue, students should submit their documentation promptly and consult their Academic Advisor for advice during their recovery period. Whenever possible, students who require academic accommodation should provide notification and documentation in advance of due dates, examinations, etc. **Appropriate academic accommodation will be determined by the Dean's Office/Academic Advisor in consultation with the student's instructor(s).** Academic accommodation may include extension of deadlines, waiver of attendance requirements for classes/labs/tutorials, arranging Special Exams or Incompletes, re-weighting course requirements, or granting late withdrawals without academic penalty

Please note that personal commitments (e.g., vacation flight bookings, work schedule) which conflict with a scheduled test, exam or course requirement are **not** grounds for academic accommodation.

A UWO Student Medical Certificate (SMC) is **required** if a student is seeking academic accommodation on medical grounds. This documentation should be obtained at the time of the initial consultation with the physician/nurse practitioner or walk-in clinic. A SMC can be downloaded from: [http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf) . The student must request documentation sufficient to demonstrate that her ability to meet academic responsibilities was seriously affected. Please note that under University Senate regulations documentation stating simply that the student “was seen for a medical reason” or “was ill” is **not** adequate to support a request for academic accommodation.

The full policy on requesting accommodation due to illness can be viewed at:

[http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page\\_12](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12)

## 2. ACADEMIC CONCERNS

If you feel that you have a medical or personal challenge that is interfering with your work, contact your instructor and Academic Advisor as soon as possible. Problems may then be documented and possible arrangements to assist you can be discussed at the time of occurrence rather than on a retroactive basis. Retroactive requests for academic accommodation on medical or compassionate grounds are not normally considered.

If you think that you are too far behind to catch up or that your work load is not manageable, you should consult your Academic Advisor. If you consider reducing your workload by dropping one or more courses, this must be done by the appropriate deadlines (refer to the Registrar's website, <http://brescia.uwo.ca/academics/registrar-services/> or the list of official sessional dates in the Academic Calendar, see the Sessional Dates tab at <http://www.westerncalendar.uwo.ca/index.cfm?SelectedCalendar=Live&ArchiveID=> ). 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 eligibility and/or Entrance Scholarship eligibility.*

## 3. ABSENCES

**Short Absences:** If you miss a class due to a minor illness or other problems, check your course outline for information regarding attendance requirements and make sure you are not missing a test or assignment. Cover any readings and arrange to borrow notes from a classmate. Contact the course instructor if you have any questions.

**Extended Absences:** If you have an extended absence, you should contact the course instructor and an Academic Advisor. Your course instructor and Academic Advisor can discuss ways for you to catch up on missed work and arrange academic accommodations, if appropriate and warranted.

It is important to note that the Academic Dean may refuse permission to write the final examination in a course if the student has failed to maintain satisfactory academic standing throughout the year or for too frequent absence from the class or laboratory

([http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=5&SelectedCalendar=Live&ArchiveID=#SubHeading\\_68](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=5&SelectedCalendar=Live&ArchiveID=#SubHeading_68) ).

## 4. SCHOLASTIC 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:

[http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page\\_20](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_20) .

Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism and other academic offences. Note that such offences include plagiarism, cheating on an examination, submitting false or fraudulent assignments or credentials, impersonating a candidate, or submitting for credit in any course without the knowledge and approval of the instructor to whom it is submitted, any academic work for which

credit has previously been obtained or is being sought in another course in the University or elsewhere. Students are advised to consult the section on Scholastic Discipline for Undergraduate Students in the Academic Calendar.

If you are in doubt about whether what you are doing is inappropriate or not, consult your instructor, the Academic Dean's Office, or the Registrar. A claim that "you didn't know it was wrong" is not accepted as an excuse.

The penalties for a student guilty of a scholastic offence (including plagiarism) include refusal of a passing grade in the assignment, refusal of a passing grade in the course, suspension from the University, and expulsion from the University.

### **Plagiarism:**

Students must write their essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence.

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>).

### **Computer-marked Tests/exams:**

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating. Software currently in use to score computer-marked multiple-choice tests and exams performs a similarity review as part of standard exam analysis.

## **5. PROCEDURES FOR APPEALING ACADEMIC EVALUATIONS**

All appeals of a grade must be directed first to the course instructor. If the student is not satisfied with the decision of the course instructor, a written appeal is to be sent to the School Chair. If the response of the Chair is considered unsatisfactory to the student, she may then submit a written appeal to the Office of the Dean. If the student is not satisfied with the decision of the Dean, she may appeal to the Senate Review Board Academic (SRBA), if there are sufficient grounds for the appeal. For information on academic appeals you can consult your Academic Advisor or see the Student Academic Appeals – Undergraduate in the Academic Calendar

[http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page\\_14](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_14).

Note that final course marks are not official until the Academic Dean has reviewed and signed the final grade report for the course. If course marks deviate from acceptable and appropriate standards, the Academic Dean may require grades to be adjusted to align them with accepted grading practices.

## **6. PREREQUISITES**

Unless you have either the prerequisites for a course or written special permission from the Dean to enroll in it, you will be removed from the 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 prerequisite(s).

## **7. SUPPORT**

### **Support Services**

The Brescia University College Registrar's website, with a link to Academic Advisors, is at <http://brescia.uwo.ca/academics/registrar-services/>. The website for the Student Development Centre at Western is <http://www.sdc.uwo.ca/>.

### **Mental Health and Wellness**

Students may experience a range of issues that can cause barriers to your learning, such as increased anxiety, feeling overwhelmed, feeling down or lost, difficulty concentrating and/or lack of motivation. Services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about mental health and wellness at Brescia at <http://brescia.uwo.ca/life/mental-health-wellness/>. Students who are in emotional/mental distress should refer to Health and Wellness at Western, [http://uwo.ca/health/mental\\_wellbeing/index.html](http://uwo.ca/health/mental_wellbeing/index.html), for information about how to obtain help for yourself or others.

### **Sexual Violence**

All members of the Brescia University College community have a right to work and study in an environment that is free from any form of sexual violence. Brescia University College recognizes that the prevention of, and response to, Sexual Violence is of particular importance in the university environment. Sexual Violence is strictly prohibited and unacceptable and will not be tolerated. Brescia is committed to preventing Sexual Violence and creating a safe space for anyone in the Brescia community who has experienced Sexual Violence.

If you or someone you know has experienced any form of Sexual Violence, you may access resources at <http://brescia.uwo.ca/life/sexual-violence/>.

Portions of this document were taken from the Academic Calendar, the Handbook of Academic and Scholarship Policy and the Academic Handbook of Senate Regulations. This document is a summary of relevant regulations and does not supersede the academic policies and regulations of the Senate of the University of Western Ontario.