

Psychological statistics using computers

School of Behavioural and Social Sciences

General Information

Course #: Psy 3800
Section #: 530/531 (lecture/lab)
Term: Fall
Year: 2019
Course Day and Time: Mondays 11:30 – 2:30
Course Location: 206 St James (computer lab)

Instructor Information

Name: Dr. Jennifer Sutton
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Telephone number for office appointments: please email instead
Office hours for students: TBA
Office location: 327 Ursuline Hall

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](#).

Required Course 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.

- You may find it helpful to have a copy of SPSS for your personal laptop or desktop at home. The latest edition can be purchased at the UWO Campus Computer Store at a campus rate (\$135 for the year as of August 2019):
<https://computerstore.uwo.ca/product/spss25lic>
- SPSS can also be accessed 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
- 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

Learning Outcomes

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*)
- give and receive constructive feedback on submitted work and revise work accordingly (Communication, Self-Awareness)

Brescia Competencies

- Critical Thinking
- Problem Solving
- Inquiry & Analysis
- Communication
- Self-awareness

Teaching Methodology and Expectations of Students

Class meetings will run as a mixture of lecture and in-class activities, including hands-on work with SPSS. Homework assignments will cover multi-step tasks that can include choosing appropriate tests, running tests in SPSS and communicating the results in writing. I expect students to 1) come to class with lecture notes printed in hardcopy or open on your computer in order to follow along and take notes, and 2) participate fully in

activities. Whether you take notes by hand or on a laptop, it's good to be prepared to write with paper and pen for some in-class activities.

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, video-recording, 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.

Evaluation

Evaluation Breakdown:

Component	Weight	Date/Deadline	Learning Outcome	Brescia Competencies
Results Reports (2 x 15% each)	30%	Oct 7, Nov 25 by start of class, then peer review continues for approx. 1 week	All listed on first page of syllabus	Communication, Inquiry & Analysis, Critical Thinking, Problem Solving, Self-Awareness)
Mini-Assignments (2 x 5% each)	10%	Sept 30, Nov 11 by start of class	Conduct and interpret appropriate statistical tests	Problem solving, Inquiry & Analysis, Communication
Quizzes (10 x 3% each)	30%	Weekly at start of class beginning Sept 16	Determine and interpret statistical tests	Problem solving, Inquiry & Analysis
Final Exam	30%	Dec exam period TBA	Determine and interpret statistical tests	Problem solving, Inquiry & Analysis

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.

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 on Owl when class begins at 11:30. Late reports will be subject to a 10% per day penalty, starting at 11:30 am on the due date. Thus, a report uploaded on:

the Monday due date anytime after 11:30 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. The peer reviews you provide are time-sensitive and cannot be submitted late; each one that is not completed on time will receive 0 out of 2 points. In addition, your revision summary letter must be submitted with your revision in one document.

Academic Accommodation

For course components worth any amount of the total course grade, please see the Academic Policies and Regulations section at the end of this course outline or consult the Academic Calendar.

Course Content

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

Weekly Organizer:

Class	Date	Description	Field Chapter on reserve @ BUC library	Assignments and/or Readings Due
Weekly quizzes at the start of class begin September 16				
1	Sept 9	Basic concepts review, problems with NHST, effect size	1-3	
2	Sept 16	Correlation	8	
3	Sept 23	Linear Regression	9	Mini-assignment 1 released after class
4	Sept 30	Multiple Regression	9	Mini-assignment 1 due Correlation/Regression report released after class
5	Oct 7	<i>t</i> test	10	Corr/Reg Report due by start of class, then peer review process complete by Tuesday Oct 15 (see class for specific peer review deadlines)
Oct 14: Thanksgiving, no class meeting				
6	Oct 21	Oneway Analysis of Variance	12	
7	Oct 28	Completely Randomized Factorial Analysis of Variance	14	Mini-assignment 2 released after class
Nov 4: Fall break, no class meeting				
8	Nov 11	Repeated Measures Analysis of Variance	15	Mini-assignment 2 due by start of class
9	Nov 18	Mixed Analysis of Variance	16	ANOVA report released after class

10	Nov 25	Multivariate Analysis of Variance	17	ANOVA Report due by start of class, then peer review process complete by class time on Dec 2 (see class for specific peer review deadlines)
11	Dec 2	Factor Analysis/Principal Components Analysis	18	

Final Exam in December Finals Period, date TBA

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) for support. Furthermore, please notify me if you are comfortable in doing so. This will enable me to point you toward resources at Brescia that you may not be aware of (e.g., Brescia Care Program).

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 tap into the Brescia Care Program if you are comfortable speaking to me.

Are you in crisis? Click here for a comprehensive list of contacts that can help: <http://brescia.uwo.ca/life/mental-health-wellness/resources/crisis-contacts/>

2019-20 BRESCIA UNIVERSITY COLLEGE ACADEMIC POLICIES AND REGULATIONS

1. POLICY REGARDING ACADEMIC ACCOMMODATION

The complete policy regarding [Accommodation for Illness - Undergraduate Students](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12) can be found at http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12.

Students who have long-term or chronic medical conditions which may impede their ability to complete academic responsibilities should seek Academic Accommodation through Student Accessibility Services (http://www.westerncalendar.uwo.ca/PolicyPages.cfm?PolicyCategoryID=1&Command=showCategory&SelectedCalendar=Live&ArchiveID=#Page_10).

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.

Students who experience an illness or extenuating circumstance sufficiently severe to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes:

1. Submitting a **Self-Reported Absence** form provided that the conditions for submission are met;
2. For medical absences, submitting a **Student Medical Certificate (SMC)** signed by a licensed medical or mental health practitioner;
3. For non-medical absences, submitting **appropriate documentation** (e.g., obituary, police report, accident report, court order, etc.) to their Academic Advisor. Students are encouraged to contact their Academic Advisor to clarify what documentation is acceptable.

Requests for Academic Consideration Using the Self-Reported Absence Portal

Students who experience an unexpected illness or injury or an extenuating circumstance of 48 hours or less that is sufficiently severe to render them unable to meet academic requirements should self-declare using the online Self-Reported Absence portal. This option should be used in situations where the student expects to resume academic responsibilities within 48 hours. Note that the excused absence includes all courses and academic requirements within the up to 48 hours, it is not intended to provide an excused absence from a single course while students fulfill their academic responsibilities in other courses during that time.

The following conditions are in place for self-reporting of medical or extenuating circumstances:

1. Students will be allowed **a maximum of two self-reported absences** between September and April and one self-reported absence between May and August;
2. The duration of the absence will be for a maximum of 48 hours from the time the Self-Reported Absence form is completed through the online portal, or from 8:30 am the following morning if the form is submitted after 4:30 pm;
3. The excused absence will terminate prior to the end of the 48 hour period if the student undertakes significant academic responsibilities (writes a test, submits a paper) during that time;
4. Self-reported absences will **not** be allowed for scheduled final examinations; midterm examinations scheduled during the December examination period; or for final lab examinations scheduled during the final week of term;
5. Self-report absences may **not** be used for assessments worth more than 30% of any course;
6. Any absences in excess of 48 hours will require students to present a Student Medical Certificate (SMC), or appropriate documentation;
7. Students **must** communicate with their instructors **no later than 24** hours after the end of the period covered by the Self-Reported Absence form to clarify how they will fulfil the academic expectations they may have missed during the absence.

Request for Academic Consideration for a Medical Absence

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 their academic responsibilities. Minor ailments typically treated by over-the-counter medications will not normally be accommodated.

The following conditions apply for students seeking academic accommodation on medical grounds:

1. Students must submit their Student Medical Certificate (SMC) 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. An SMC can be downloaded from http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf ;
2. 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;
3. Whenever possible, students who require academic accommodation should provide notification and documentation in advance of due dates, scheduled tests or examinations, and other academic requirements;
4. Students **must** communicate with their instructors **no later than 24 hours** after the end of the period covered by the SMC to clarify how they will fulfil the academic expectations they may have missed during the absence;
5. Appropriate academic accommodation will be determined by the Dean's Office/Academic Advisor in consultation with the course instructor(s). Academic accommodation may include extension of deadlines, waiver of attendance requirements, arranging Special Exams (make-ups), re-weighting course requirements, or granting late withdrawal without academic penalty.

The [full policy on requesting accommodation due to illness](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12) can be viewed at:

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; please refer to the [Registrar's website](http://brescia.uwo.ca/academics/registrar-services/), <http://www.westerncalendar.uwo.ca/SessionalDates.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).

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.

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, they may then submit a written appeal to the Office of the Dean. If the student is not satisfied with the decision of the Dean, they may appeal to the Senate Review Board Academic (SRBA), if there are sufficient grounds for the appeal and if the matter falls within the jurisdiction of the SRBA. For information on academic appeals 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.

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/>. Students can access supports through Brescia's Student Life Centre (<http://brescia.uwo.ca/life/student-life/>) and Learning Skills Services at Western (<https://www.uwo.ca/sdc/learning/>)

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 obtain information about how to obtain help for yourself or others through **Mental Health & Wellness at Brescia** (<http://brescia.uwo.ca/life/mental-health-wellness/>) and **Health and Wellness at Western**, http://uwo.ca/health/mental_wellbeing/index.html.

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.
