

**Psychological Statistics Using Computers**  
**Psychology 3800f-530****Fall 2016****Class Meetings:**

Lecture + Lab: Mondays 9:30 AM – 1:30 PM, St. James Room 206 (computer lab)

**Course Instructor** Dr. Jennifer Sutton  
*Office:* St. James portable room P2  
*Email:* jennifer.sutton@uwo.ca  
*Tele:* 519-432-8353 ext 28120  
*Office Hours:* TBA

**Materials:**

- Any stats book that gives an introduction to topics in the course (see schedule) is fine. One that does and is on reserve at the Brescia library, is:

Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics, 4<sup>th</sup> 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.

- A USB drive is the best and most reliable way to save your work in the computer lab.
- Lecture/lab slides, as well as supplemental 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. All resources, including class slides, helpful websites, data sets, etc. will be posted on Owl.

**Course Description and Information**

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.

**Prerequisite(s):** Psychology 2800E or Psychology 2856F/G, Psychology 2810 or Psychology 2851A/B, and registration in third or fourth year of the Honors Specialization Psychology program or permission of the department.

## 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 (Problem Solving)
- conduct a variety of statistical tests using SPSS software (Inquiry and Analysis)
- interpret the output of statistical tests conducted with SPSS (Inquiry and Analysis)
- write an APA-style results section reporting the outcomes of common statistical tests (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 come back for lab.

Assignments to complete for the next week will be available after our weekly course meeting.

## Evaluation

Student evaluation will be based on:

**Results Reports** (4 reports x 8% each = 32%)

**Mini-Assignments** (2 x 4% each = 8%)

**Quizzes** (2 quizzes x 10% each = 20%)

**Article Analysis** (1 x 10%)

**Final Exam** (30%)

**Results Reports:** You will be required to perform a specific statistical test using SPSS and write a maximum 2-page Results-type section in APA format. You will also be required to submit your SPSS output. More information about the reports will be available in class.

**Mini-Assignments:** There will be two mini-assignments in the first half of the semester. These will involve analyzing data in SPSS and answering questions about the analysis and/or the interpretation of the output.

**Quizzes:** In-class quizzes will be conducted twice during the semester. The quizzes will be held at the beginning of class and will cover the topics discussed since the last quiz (or the beginning of the term in the case of Quiz 1). 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 quiz re-weighted. Students who miss a quiz and do not provide documentation through the academic advisor will receive a zero for the quiz.

**Article Analysis:** In 2 – 3 double-spaced pages, you will critically analyze a research article of your choosing with special emphasis on the statistical analyses performed, their interpretation, and their appropriateness for the research design. This article can be something you've read for your thesis or another course and must report the results of an original study in psychology (i.e., no meta-analyses or review papers). Use the knowledge gained in this course as a foundation to understand the paper's analyses and investigate and understand any statistical concepts you are unfamiliar with. Specifics about this paper will be discussed in class.

**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**

Report assignments and mini-assignments will be available on the Owl site after our Monday meeting (see schedule below). Required hard copies for any component are due at the beginning (no later than 9:45 am) of the class meeting. Late reports will be subject to a 10% per day penalty, starting at 9:45 am on the due date. Thus, a report handed in on:

- the Monday due date anytime after 9:45 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%

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

All work submitted after a class meeting has ended should be taken to the late assignment (hard copy) drop-off box located outside the Dean's Office. This box will be cleared daily at 4 pm; anything submitted after 4 pm is considered the next day's date. Please note that use of the drop-off box should be considered a "last resort", not the primary way to submit assignments. Students should not submit late assignments to the Brescia welcome desk staff or staff at the Hive.

In addition, the text of your written reports (i.e., not the SPSS output) and the article analysis paper should be submitted to **turnitin.com** via the Owl course page by 9:45 am on the due date. Please do this before class starts to avoid disruption (a good habit is to submit it while your paper prints). While there is no mark penalty for a late turnitin submission, marked hard copies of reports will not be handed back without such a submission.

Accommodation for handing in late or failing to hand in any assignment, 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.

Please note that your final mark in this course is based exclusively on your performance in the above assessments. 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.

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

<b>Date</b>	<b>Topic</b>	<b>Field Chapter on reserve</b>	<b>Assignment Due</b>
Sept 12	Basic concepts review, problems with NHST, effect size	1 - 2	--
Sept 19	Correlation	7	--
Sept 26	Linear Regression	8	Mini-assignment 1
Oct 3	Multiple Regression	8	Mini-assignment 2
Oct 10	<i>Thanksgiving, no class today</i>		
Oct 17	<b>Quiz 1, t-test</b>	9	Multiple Reg. Report
Oct 24	Oneway Analysis of Variance	11	t- test Report
Oct 31	Completely Randomized Factorial Analysis of Variance	13	Oneway Report
Nov 7	Repeated Measures Analysis of Variance	14	
Nov 14	Mixed Analysis of Variance	15	
Nov 21	<b>Quiz 2, Multivariate Analysis of Variance</b>	16 (16.1 – 16.3 only)	Mixed ANOVA Report
Nov 28	Factor Analysis (Principal Components Analysis)	17	
Dec 5	Nonparametrics: Chi Square	6 & 18 (Chi square)	Article analysis paper due
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 with software like *Google Drive* or *Dropbox*) and 2) not waiting until the last minute to print.** Your stress levels, and likely your marks, will thank you.

## 2016-17 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. Documentation shall be submitted as soon as possible to the student's Academic Advisor indicating the period of illness and when the student should be able to resume academic responsibilities. 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. Appropriate academic accommodation will be determined by the Dean's Office in consultation with the student's instructor(s). 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.westerncalendar.uwo.ca/2016/pg117.html> 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.

Whenever possible, requests for academic accommodation should be initiated in advance of due dates, examination dates, etc. Students must follow up with their professors and Academic Advisor in a timely manner.

The full policy on requesting accommodation due to illness can be viewed at:  
[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_illness.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf)

### 2. ACADEMIC CONCERNS

If you feel that you have a medical or personal problem 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 may not be considered.

If you think that you are too far behind to catch up or that your work load is not manageable, you should consult an 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, [www.registrar.uwo.ca](http://www.registrar.uwo.ca), for official dates). 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.*

The 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/2016/pg130.html> )

### 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.

#### 4. POLICY ON CHEATING & ACADEMIC MISCONDUCT

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 Web site:

<http://www.westerncalendar.uwo.ca/2016/pg113.html>

Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism and other academic offences. Students are urged to read the section on Scholastic Offences in the Academic Calendar. 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 Academic Misconduct in the Western Academic Calendar.

If you are in doubt about whether what you are doing is inappropriate or not, consult your instructor, the Student Services Centre, 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 (see Scholastic Offence Policy in the Western Academic Calendar).

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.

##### **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 signed by the student must be sent to the Department Chair. If the response of the department is considered unsatisfactory to the student, she may then submit a signed, written appeal to the Office of the Dean. Only after receiving a final decision from the Dean may a student appeal to the Senate Review Board Academic. A Guide to Appeals is available from the Ombudsperson's Office, or you can consult an Academic Advisor. Students are advised to consult the section on Student Academic Appeals under Academic Rights and Responsibilities in the Western Academic Calendar (<http://www.westerncalendar.uwo.ca/2016/pg112.html> )

## 6. PREREQUISITES AND ANTIREQUISITES

Unless you have either the prerequisites for a course or written special permission from your 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).

Similarly, you will also be deleted from a class list if you have previously taken an antirequisite course unless this has the approval of the Dean. These decisions may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course because you have taken an antirequisite course.

## 7. 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 at <http://www.sdc.uwo.ca/>. Students who are in emotional/mental distress should refer to Mental Health @ Western [http://uwo.ca/health/mental\\_wellbeing/](http://uwo.ca/health/mental_wellbeing/) for information including a complete list of options about how to obtain help.

---

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.