



Psychology 2850A(530)
Statistics for Psychology I
School of Behavioural and Social Sciences

General Information

Course #: PSY2850A
Section #: 530
Term: Fall
Year: 2019
Course Day and Time: Fridays 8:30am-11:30am
Course Location: BR 202

Instructor Information

Name: Elizabeth Kelly
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Office hours for students: Fridays 11:30am-12:30pm
Office location: UH 365

Course Description

This course provides an introduction to techniques of statistical analysis with an emphasis on application in Psychology. Topics include descriptive statistics, the normal distribution, probability, inferential statistics, and hypothesis testing. Also included will be discussion on the interpretation of statistics in other research designs including correlation, repeated samples testing and analysis of variance.

Prerequisites: At least 60% in a 1000 level Psychology course.

Antirequisites: All University level statistics courses numbered 2000 or above, including Psychology 2810, 2820, 2830A, 2885.

Required Course Materials

For this course Psych 2850A, we cover chapters 1 – 8 from the textbook listed below. If you are continuing with Psych 2851B, you will cover chapters 9 – 17.

Gravetter, F. J. & Wallnau, L. B. (2017). *Statistics for the Behavioral Sciences*, 10th edition. Cengage Learning.

OR

Mindtap for Statistics for the Behavioral Sciences – E-text + online resources (2017), 10th edition, Cengage Learning (highly recommended option).

Mindtap for Statistics for the Behavioral Sciences is highly recommended. *Mindtap* includes an e-copy of the text as well as online resources (videos, tutorials, practice quizzes). *Mindtap* can be purchased with 6 or 12 months access depending on your course needs. Note that *Mindtap* is also available bundled with a hard copy of the textbook. This option is equally highly recommended.

Learning Outcomes and Brescia Competencies

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

- a) Identify how statistical techniques fit into the general process of scientific research: how, when, and why they are used (*Brescia Competencies: Communication 2; Critical thinking 2; Problem solving 2*).
- b) Apply descriptive statistics to present data using graphical representation, measures of central tendency and variability (*Brescia Competencies: Communication 2; Critical thinking 2; Problem solving 2*).
- c) Determine the probability of events from a normal distribution (*Brescia Competency: Problem solving 2*).
- d) Calculate basic inferential statistics including z-Scores (*Brescia Competency: Problem solving 2*).
- e) Assess a set of data to determine which statistical test would be most appropriate and implement the logic of hypothesis testing (*Brescia Competencies: Communication 2; Critical thinking 2; Problem solving 2*).
- f) Appropriately report and interpret the results of the various statistics tests covered in the course (*Brescia Competencies: Communication 2; Critical thinking 2; Problem solving 2*).
- g) Actively engage in a cooperative and reflective learning environment (*Brescia Competencies: Communication 2; Social awareness & engagement 1; Self awareness & development 1*)

For description of Brescia Competencies, see:

<http://brescia.uwo.ca/academics/bresciacompetencies/>

Teaching Methodology and Expectations of Students

Though the primary instructional approach for this course is lecture, activities will be incorporated as much as possible to every class. Students are expected to attend regularly and participate.

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

Exams

Midterm Exam: The midterm exam is based on assigned textbook material from Chapters 1-4 and the corresponding lectures. The midterm exam will be worth 35% of your final grade. The midterm exam will take place during regularly scheduled class time in the normal location. See the schedule for date.

Final Exam: The 3-hour final exam will be based on assigned textbook material from Chapters 5-8 and the corresponding lectures. The final exam will be worth 40% of your final grade. The final exam will be scheduled by the Registrar during the December Exam Period (Date, time, and location to be announced once finalized).

The midterm and final exams will include questions in several different formats, including short written answers, calculation questions, definitions, and multiple choice. You *will* have to calculate statistical terms in the exams. Marks will be given for selecting the correct statistical test (unless given as part of the question), steps in working out the problem, the correct statistic (i.e., the correct numerical value), and, in some cases, interpretation of the statistic. Thus, even if you arrive at an incorrect final value, marks for intermediate steps may be available. The relative weighting of different types of exam questions will change during the course; you can expect more questions with written answers during some parts of the course (e.g., probability), and more calculation questions with other topics (e.g., z-Scores). More details about exam format will be available as we approach the exam dates. Exams are closed book. Any necessary formula and tables will be provided with question booklets. Calculators, but not laptops or cell phones, are allowed in the exams.

Assignments

Twenty-one percent (21%) of your mark comes from a series of assignments. There are three assignments and you need to submit all three. Because the number of steps involved in completing the assignments will vary, the marking of assignments may vary. For example, some assignments may

be marked out of 20 while others may be marked out of 25. Despite this difference, each assignment contributes the same amount to your final grade (7%). Assignments will usually involve working out a statistical problem (showing all calculations), providing a graphic or concise written interpretation or presentation of the analysis, and short answer or definition questions on the corresponding statistical theory. Assignments will be posted on the course website about one week before the due date. Assignments should be handwritten and should show all work. As with the exams, marks will be given not only for the correct answer but also for showing formulae, calculations, and intermediate steps. Assignment due dates are listed on the schedule. Assignments should be submitted in class at the beginning.

Late Assignments: Assignments submitted later than 5 minutes after the start of class on the due date will be counted as one day late and the 20% per day late penalty applied. There is a per day penalty for assignments submitted later than 5 minutes after the start of class on the due date. The late penalty is 20% of the assignment total per day late. Students requiring academic accommodation for assignments will be required to follow the Policy Regarding Makeup Exams and Extensions of Deadlines below.

Participation

Active engagement in learning is a critical component for student success. Therefore, 4% of your final grade will come from activities designed to assess your learning engagement. These activities will usually take place during class but may occasionally be assigned to be completed outside of class time. Participation activities will not be announced in advance. You must be present in class in order to complete in class participation activities or to hear the instructions/requirements for outside of class participation activities. Participation activities assigned to be completed outside of class may be completed at any time before the required due date. Out of class activities may not be substituted for in class activities. Academic accommodation will only be granted to students who have provided appropriate documentation (see Policy Regarding Makeup Exams and Extensions of Deadlines below).

Evaluation breakdown (see Course Content / Schedule for dates)

Evaluation	%
Midterm Exam	35%
Final Exam	40%
Assignments (3 X 7%)	21%
Participation (on-going)	4%

Please note that grades cannot be adjusted on the basis of need. Your mark in the course will be the mark that you earn. Exams cannot be re-written nor assignments resubmitted to obtain a higher mark. There are no supplemental or bonus assignments.

Academic Accommodation

For course components worth 10% or more 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. For course components worth less than 10% of the total course grade, documentation will be required. Medical or other supporting documentation should be submitted to your Academic Advisor.

Course Content / Schedule

Material listed in the textbook reading column represents the material we will *begin* to cover during class that day. All chapters will however require slightly more than one class to discuss. Thus, every class we will be finishing one chapter and starting the next chapter. For example, the second week of class we will be finishing our discussion of chapter 1 and beginning our discussion of chapter 2. The last day of class during each of the two halves of the term before an exam will therefore entail a class primarily devoted to covering the last chapter of the section (because we will have fallen behind and need to catch-up), though a brief review will also be provided.

Date	Topic	Textbook Reading	Assignment
Sept. 6	Overview and Introduction to Statistics	Ch. 1	
Sept. 13	Frequency Distributions	Ch. 2 (*exclude pg. 52-57)	
Sept. 20	Central Tendency	Ch. 3 (*exclude pg. 80-81)	
Sept. 27	Variability	Ch. 4	Due Date #1
Oct. 4	Catch-up (Ch. 4) and Review	Ch. 1-4	
Oct. 11	<i>Special Drop-in Thanksgiving Session</i>		
Oct. 18	Midterm Exam (Ch. 1, 2, 3, & 4)		
Oct. 25	z-Scores	Ch. 5	
Nov. 1	Probability	Ch. 6 (*exclude pg. 179-183)	Due Date #2
Nov. 8	<i>Fall Reading Week</i>		
Nov. 15	Probability and Samples	Ch. 7	
Nov. 22	Introduction to Hypothesis Testing and Research Designs	Ch. 8	Due Date #3
Nov. 29	Catch-up (Ch. 8) and Review	Ch. 5-8	
TBA	Final Exam (Ch. 5, 6, 7, & 8)		

*Exclusions for Textbook Readings

Ch. 2 - exclude pg. 52 – 55 "Interpolation" & pg. 56-57 "Stem and Leaf Displays" (Sec 2.5)

Ch. 3 - exclude pg. 80-81 "Finding the Precise Median ..." & pg. 81 "Using Interpolation ..." (Box 3.2)

Ch. 6 - exclude pg. 179-183 "Probability and the Binomial ..." (Sec 6.4)

General Information

Starting in late October and continuing through the rest of the course we will be using the *tables found in the back of the textbook (Appendix B pg. 647 - 651)*. You should either bring your textbook or a photocopy of the tables to class. During regular classes (but not exams), you are welcome to share your textbook or photocopied statistical tables with your classmates.

Buy a calculator and bring it with you to all classes. It is recommended that your calculator have squares, square roots, some memory capacity, and basic statistical functions such as means and sum of squares (Σx^2). You do not need an expensive or elaborate calculator, even quite basic models will do everything that you need.

Learn how to use your calculator. We will not spend any class time on how to use your calculator; there are too many different models for this to be useful. It is important for you to become familiar with your calculator – be sure to devote some time to this.

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.
