



Calendar Description

(3 hrs Lecture | 3 hrs Lab) This lab course introduces basic data analytic techniques appropriate to experimental and non-experimental research designs. Topics include frequency distributions, descriptive statistics (e.g., mean, standard deviations), and inferential statistics (e.g., estimation and hypothesis testing for means, correlation and count data). The lab component provides an opportunity to develop computational and basic computer skills relevant to data analysis. This course is required for Majors and Honours students in Psychology.

Restrictions: Students may not hold credit for this course and STAT-1201 | STAT-1302 | STAT-1601 | STAT-2001.

Requisite Courses: PSYC-1000 [prerequisite(s)]; PSYC-2101L (lab) (must be taken concurrently).

Instructor

Dr. Erin Buckels

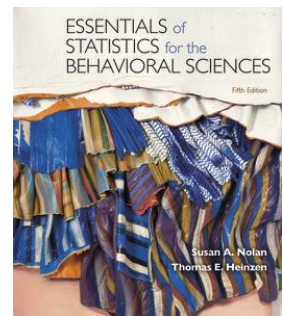
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Phone: (204) 988-7536

Remote Office Hours: Wednesdays 9:30–11:30 AM at <https://zoom.us/j/94698245464> (see NEXUS for passcode)

Required Materials and Equipment

1. *Essentials of Statistics for the Behavioral Sciences*, 5th Edition by Nolan & Heinzen with a 6-month access to LaunchPad
 - Option 1: e-text and looseleaf text (ISBN: 9781319443498)
 - Option 2: e-text only (ISBN: 9781319443511)
 - Available from the [UWinnipeg Bookstore](#)
2. Basic scientific calculator (e.g., Texas Instruments TI-30Xa). Calculator apps/websites are *not* permitted during tests/exams.
3. Electronic device with a webcam (e.g., smartphone, laptop) and high-speed Internet connection; see the notice of Zoom proctoring on page 2.



Learning Outcomes

By completing this course, you should gain a working knowledge of descriptive and inferential statistics. The learning objective is to achieve the statistical literacy necessary for 2000/3000-level Psychology coursework. Given a research question and information about the data collected, I expect you to determine the appropriate statistical analysis, calculate the test statistic, and interpret the results in the context of that research question.

Lectures

There are no live lectures. Please access the lecture videos and other instructional content on the [NEXUS course website](#) at your convenience. Labs are live on Zoom.

Evaluation

Course grades will be determined by your performance on two NEXUS tests, Launchpad assignments, lab assignments, and a cumulative final exam. The weighting in determining your final grade will be as follows:

Component	Weight
1. Test 1 on Friday, Oct 8, 2021 Section 1: 9:30–10:20 AM Section 2: 10:30–11:20 AM	15%
2. Test 2 on Friday, Nov 12, 2021 Section 1: 9:30–10:20 AM Section 2: 10:30–11:20 AM	15%
3. Weekly Launchpad Assignments	20%
4. Lab (see the lab syllabus for more details)	15%
5. Final Exam (TBA)	35%

Total: 100%

Tests/exams are *synchronous, Zoom-proctored assessments delivered on NEXUS*. I expect you to complete your test with your registered section (1 or 2) in the assigned timeslot for that section (Section 1: 9:30-10:20 AM; Section 2: 10:30-11:20 AM). Complete these assessments independently and do not collaborate with others.

Tests/exams will have a mixture of multiple-choice, short answer, and statistical problem type questions. The final exam will cover the entire course. Students are responsible for all material presented in Lecture and Lab classes, as well as material in assigned readings, even if not covered in Lecture or Labs.

Notice Regarding Remote Learning

A permitted or necessary change in the mode of delivery may require adjustments to important aspects of course outlines, like class schedule and the number, nature, and weighting of assignments and/or exams. Students can find answers to frequently ask questions related to remote learning here: <https://www.uwinnipeg.ca/covid-19/remote-learning-faq.html>

Notice Regarding Remote Test and Exam Proctoring

Tests/exams are proctored through a live Zoom meeting and may also be recorded locally for later review. Proctors will be monitoring for any evidence of academic dishonesty. Each proctor will monitor a small group of students simultaneously. Students must sit and face an engaged camera to enable monitoring. Microphones can be muted. After being reviewed for academic dishonesty, any recordings made will be promptly deleted if no such evidence is found.

As part of this monitoring, please note:

- Each student's name and everything within their camera's view, including their face, body and background, will be visible to the proctor and the other students within the group.
- If a student uses the chat feature, anything written will be visible to all meeting participants.
- If a student chooses to un-mute their microphone, anything said will be heard by all meeting participants.

Zoom has been configured to disable students from recording the test/exam. Information regarding Zoom's data collection, including a link to its privacy policy, can be found at <https://www.uwinnipeg.ca/privacy/zoom-privacy-notice.html>. Student personal information is collected under the University of Winnipeg Act and 36(1)(b) of the Freedom of Information and Protection of Privacy Act. For information regarding privacy at UWinnipeg, contact Dan Elves, Senior Information and Privacy Officer, at da.elves@uwinnipeg.ca or 204.988.7538.

Permitted Equipment and Policies for Remote Tests and Exams

Photo identification (such as your U of W student card) is mandatory to write all tests/exams. The proctor will verify your identity over Zoom. Scientific calculators are permitted, but you must *show all your work*. I will distribute an official formula sheet (without labels for the formulae) and statistical tables as a NEXUS handout; you should print it out and refer to it during the test/exam.

During these closed-book learning assessments, you *may not* consult your textbook, study notes, or outside sources on the Internet. You are not allowed to use online statistical calculators or calculator apps. At the beginning of each assessment, I will remind you of these policies, and you will complete an academic integrity declaration upon submission. Failure to complete the declaration will result in a zero. If I find evidence that students have collaborated or consulted outside sources in these learning assessments, I will forward that evidence to the Departmental Review Committee for investigation of academic misconduct. **If cheating occurs in an electronic group (e.g., on Telegram or WhatsApp), the entire group can be charged with academic misconduct!**

Launchpad Assignments

Launchpad assignments are open-book quizzes to help you learn and review the textbook material. They are **due at 11:59 PM every Monday** (starting Sept 13). Most weeks, there are multiple assignments due. You can work ahead and complete them ahead of time if you wish. Please do not wait until the last minute to start them. Due dates are on the following page.

LaunchPad Due Dates:

Mon, Sep 13

- Ch. 1 Interpreting Statistical Results: Can a Visual Illusion Improve Sports Performance?
- Ch. 1 LearningCurve: An Introduction to Statistics and Research Design
- Ch. 2 Interpreting Statistical Results: The Big Picture on Depression
- Ch. 2 LearningCurve: Frequency Distributions
- Ch. 3 LearningCurve: Visual Displays of Data

Mon, Sep 20

- Ch. 4 Interpreting Statistical Results: Are You Going to Eat That?
- Ch. 4 LearningCurve: Central Tendency and Variability

Mon, Sep 27

- Ch. 5 Interpreting Statistical Results: Is Everyone Else Having More Fun?
- Ch. 5 LearningCurve: Sampling and Probability
- Ch. 6 Interpreting Statistical Results: Head Injury
- Ch. 6 LearningCurve: The Normal Curve, Standardization, and z Scores

Mon, Oct 4

- Ch. 7 Interpreting Statistical Results: Who Gets Bullied?
- Ch. 7 LearningCurve: Hypothesis Testing with z Tests

Mon, Oct 18

- Ch. 8 Interpreting Statistical Results: In Their Shoes
- Ch. 8 LearningCurve: Confidence Intervals, Effect Size, and Statistical Power

Mon, Oct 25

- Ch. 9 Interpreting Statistical Results: What's a Signature Worth?
- Ch. 9 LearningCurve: The Single-Sample t Test and the Paired-Samples t Test
- Ch. 9 Which Test Is Best? Global Happiness
- Ch. 9 Which Test Is Best? The Open Syllabus Project

Mon, Nov 1

- Ch. 10 Interpreting Statistical Results: Are All Texts Created Equal?
- Ch. 10 LearningCurve: The Independent-Samples t Test
- Ch. 10 Which Test Is Best? Successful Dieting

Mon, Nov 8

- Ch. 11 Interpreting Statistical Results: Is False Modesty Actually Flattering?
- Ch. 11 LearningCurve: One-Way Between-Groups ANOVA
- Ch. 11 Which Test Is Best? Serial Killers

Mon, Nov 15

- Ch. 12 LearningCurve: Two-Way Between-Groups ANOVA

Mon, Nov 22

- Ch. 15 Interpreting Statistical Results: And the Winner Is?
- Ch. 15 LearningCurve: Chi-Square Tests
- Ch. 15 Which Test Is Best? Getting More Responses to Emails

Mon, Nov 29

- Ch. 13 LearningCurve: Correlation
- Ch. 13 Which Test Is Best? Tinder and Online Dating
- Ch. 14 LearningCurve: Regression
- Ch. 14 Which Test Is Best? How to Improve Government Operations

Mon, Dec 6

- Ch. 16 Interpreting Statistical Results: Choosing the Right Test: Is There Power in Passion?
- Ch. 16 LearningCurve: Choosing and Reporting Statistics
- Ch. 16 Which Test Is Best? Crisis Text Line - Crisis Trends

Grade Distribution/Cutoffs

A+ at instructor's discretion	A 85 and above A- 80–84	B+ 75–79 B 70–74	C+ 65–69 C 60–64	D 50–59 F less than 50
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These cutoffs are tentative and may be changed in either direction by i) the instructor, ii) the Departmental Review Committee, or iii) the Senate, when circumstances warrant.

Final grades will be rounded to the nearest integer. I will not respond to requests for bonus assignments or other methods to boost your final grade.

Policy Regarding Missed Tests/Illness

You will receive a grade of 0 on any test/exam that you fail to write. Students are entitled to rescheduling of exams or extended deadlines for legitimate medical or compassionate reasons (e.g., illness, physical disability, domestic affliction, or religious holidays). However, **it is the student's responsibility to inform the instructor before the date of the test/exam**, when possible, and **provide acceptable documentation** (e.g., a medical certificate from your physician; documentation from a counselor, lawyer, advising clergy, etc.) to support a medical or compassionate claim. In the event of an emergency that the student could not inform the instructor of before the date of the test/exam, the student should contact the instructor within 24 hours. To minimize the intrusion of privacy, I do not need to know your diagnosis or other details of the illness, disability, or personal circumstances. In the case of a final examination, the procedure is outlined in the Academic Regulations and Policies in section VII of the General Calendar. Students should familiarize themselves with these regulations and policies. Makeup tests may be in a different format.

If you feel that you have a medical or personal problem interfering with your work, you should contact your instructor and a [counselor at Student Services](#) as soon as possible. It is critical to document these issues at the time of occurrence. In general, retroactive requests for grade revisions on medical or compassionate grounds will not be considered.

Policy on Cheating, Academic Misconduct, and Copyright Violation

Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism, cheating, and other academic offenses. Students are encouraged to read the section on Academic Misconduct in the General Calendar. If you are in doubt about whether what you are doing is inappropriate, consult your instructor. <http://uwinnipeg.ca/academics/calendar/docs/regulationsandpolicies.pdf>. I also recommend that you watch the UW video tutorial on avoiding plagiarism: <https://www.youtube.com/watch?v=UvFdxRU9a8g>

Course materials are the property of the instructor who developed them. Examples of such materials are course outlines, assignment descriptions, lecture notes, test questions, and presentation slides—irrespective of format. Students who upload these materials to file sharing sites, or in any other way share these materials with others outside the class without prior permission of the instructor/presenter, are in violation of copyright law and University policy. Students must also seek prior permission of the instructor/presenter before, for example, photographing, recording, or taking screenshots of slides, presentations, lectures, and notes on the board.

It is a serious violation of academic integrity and intellectual property rights to upload course materials to sharing websites such as Course Hero or Chegg. Students found to be in violation of an instructor's intellectual property rights could face serious consequences pursuant to the *Academic Misconduct* or *Non-Academic Misconduct Policy* (<http://uwinnipeg.ca/academics/calendar/docs/regulationsandpolicies.pdf>); such consequences could involve legal sanction under the *Copyright Policy* https://copyright.uwinnipeg.ca/docs/copyright_policy_2017.pdf

Procedures for Appealing Academic Evaluations

If you wish to appeal a grade on an item of work or the overall grade in the course, please speak with me about your concern within seven days of receiving your grade. If you are not satisfied with the decision of the course instructor, you may wish to consider making a written appeal to the Chair of the Departmental Review Committee. Please consult the Academic Regulations and Policies Section of the General Calendar for information about appeals:

<http://uwinnipeg.ca/academics/calendar/docs/regulationsandpolicies.pdf>

A guide to appeals is available from Student Services and the UWSA Office.

Services for Students with Disabilities

Students with documented disabilities, temporary or chronic medical conditions, requiring academic accommodations for tests/exams or during lectures/laboratories are encouraged to contact Accessibility Services (AS) at 204.786.9771 or <https://www.uwinnipeg.ca/accessibility-services/> to discuss appropriate options. All information about a student's disability or medical condition remains confidential.

Additional University Policies

Undergraduate students who plan to conduct minimal-risk research interviews, focus groups, surveys, or any other method of collecting data from any person, even a family member, must obtain the approval of the Departmental Ethics Committee before commencing data collection. (For greater-than-minimal-risk or Graduate student studies, approval of the UHREB is also required.) Exceptions are research activities in class as a learning exercise. See <http://uwinnipeg.ca/research/human-ethics.html> for submission requirements and deadlines.

All students, faculty, and staff have the right to participate, learn, and work in an environment that is free of harassment and discrimination. The UW Respectful Working and Learning Environment Policy may be found online at www.uwinnipeg.ca/respect. Students are expected to conduct themselves in a respectful manner on campus and in the learning environment irrespective of platform being used. Behaviour, communication, or acts that are inconsistent with a number of UW policies could be considered "non-academic" misconduct.

Acceptable Use of Information Technology Policy:

<https://www.uwinnipeg.ca/institutional-analysis/docs/policies/acceptable-use-of-information-technology-policy.pdf>

Non-academic Misconduct Policy and Procedures:

<https://www.uwinnipeg.ca/institutional-analysis/docs/student-non-academic-misconduct-policy.pdf> and
<https://www.uwinnipeg.ca/institutional-analysis/docs/student-non-academic-misconduct-procedures.pdf>

Privacy Policy: <https://www.uwinnipeg.ca/privacy/admissions-privacy-notice.html>

Important Dates for 2021-2022

The first day of class is Wednesday, Sept 8, 2021. The last day of class is Monday, Dec 6, 2021. There are no makeup days for this class. The evaluation period is Friday, Dec 10 to Thursday, Dec 23, 2021.

The University is closed for Fall-term holidays on the following dates, irrespective of campus closure related to COVID-19:

- Monday, Sept 6, 2021 (Labour Day)
- Thursday, Sept 30, 2021 (National Day for Truth and Reconciliation)
- Monday, Oct 11, 2021 (Thanksgiving Day)
- Thursday, Nov 11, 2021 (Remembrance Day)
- Dec 24, 2021–Jan 4, 2022 (December Break)

The final date for **Voluntary Withdrawal** without academic penalty is **Nov 16, 2021**. If you are considering withdrawing from this course, I encourage you to talk with me first. Withdrawing before the VW date does not result in a fee refund. Refer to the Academic Calendar for more information: <https://www.uwinnipeg.ca/registration/course-drop-information.html>

Students may choose not to attend classes or write examinations on holy days of their religion, but they must notify their instructors at least two weeks in advance. Instructors will then provide opportunity for students to make up work and/or examinations without penalty. A list of religious holidays can be found in the 2021-2022 Academic Calendar, in the section, Important Notes (<https://www.uwinnipeg.ca/academics/calendar/dates.html>).

Tentative Lecture Schedule

This schedule is given as a guideline of the topics to be covered. Topics may not be covered on the exact dates shown, and some topics may not be covered at all.

Week	Topic (tentative schedule)	Chapter(s)
Sept 7–10	Introduction	1, 2, & 3
Sept 13–17	Central tendency and variability	4 (omit interquartile range p. 95–96)
Sept 20–24	Sampling, probability, the normal distribution, and z scores	5 & 6
Sept 27–Oct 1	Hypothesis testing with the z test	7
Oct 4–8	Confidence intervals, effect size, and power	8
NEXUS Test 1 (Chapters 1–8) Friday, Oct 8, 2021 Section 1: 9:30–10:20 AM Section 2: 10:30–11:20 AM		
Oct 11–17	<i>Reading week (no lectures)</i>	
Oct 18–22	Single-sample and paired-samples t tests	9
Oct 25–29	Independent samples t test	10
Nov 1–5	One-way ANOVA	11 (omit p. 343-346)
Nov 8–12	Two-way ANOVA	12 (omit p. 378–399)
NEXUS Test 2 (Chapters 9–12) Friday, Nov 12, 2021 Section 1: 9:30–10:20 AM Section 2: 10:30–11:20 AM		
Nov 15–19	Chi-square	15
Nov 22–26	Correlation and regression	13 & 14 (omit p. 451–454, 464–469)
Nov 29–Dec 3	Review	16
Dec 6	Course wrap up (<i>last day of MWF classes</i>)	
Final Exam (All Chapters) TBA		