ORIGINAL COURSE IMPLEMENTATION DATE:	March 1990
REVISED COURSE IMPLEMENTATION DATE:	January 2022
COURSE TO BE REVIEWED (six years after UEC approval):	September 2027

Course outline form version: 05/18/2018

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: PSYC 110

Number of Credits: 3 Course credit policy (105)

Course Full Title: Applied Statistical Analysis in Psychology

Course Short Title: Applied Stat. Analysis in Psyc

(Transcripts only display 30 characters. Departments may recommend a short title if one is needed. If left blank, one will be assigned.)

Faculty: Faculty of Social Sciences

Department (or program if no department): Psychology

Calendar Description:

Covers the basic techniques of descriptive and inferential statistics and their applications to psychological research. Methods of graphing, measures of central tendency, dispersion, and various parametric and distribution-free tests are included.

Prerequisites (or NONE):

One of the following: Essentials of Mathematics 11, Principles of Mathematics 11, Applications of Mathematics 11, Pre-Calculus 11, Foundations of Mathematics 11, Apprenticeship and Workplace Mathematics 11, MATH 084 with D grade or better, MATH 085 with D grade or better, or MSAT with 15/25 (60%) or better on Part A.

Note: As of May 2022, prerequisites will change to: (PSYC 101 or PSYC 102) and one of the following: Essentials of Mathematics 11, Principles of Mathematics 11, Applications of Mathematics 11, Pre-Calculus 11, Foundations of Mathematics 11, Apprenticeship and Workplace Mathematics 11, MATH 084 with C- grade or better, MATH 085 with C- grade or better, or MSAT with 15/25 (60%) or better on Part A.

Corequisites (if applicable, or NONE):

Pre/corequisites (if applicable, or NONE):

Antirequisite Courses *(Cannot be taken for additional credit.)*

Former course code/number: **PSYC 201**

Cross-listed with:

Dual-listed with:

Equivalent course(s):

(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)

Typical Structure of Instructional Hours

Lecture/seminar hours	45
Tutorials/workshops	
Supervised laboratory hours	
Experiential (field experience, practicum, internship, etc.)	
Supervised online activities	
Other contact hours: Class Activities	
Total hours	**45**

Labs to be scheduled independent of lecture hours: ☐ No ☐ Yes

Special Topics *(Double-click on boxes to select.)*

This course is offered with different topics:

☒ No ☐ Yes *(If yes, topic will be recorded when offered.)*

Independent Study

If offered as an Independent Study course, this course may be repeated for further credit: *(If yes, topic will be recorded.)*

☐ No ☐ Yes, repeat(s) ☐ Yes, no limit

Transfer Credit

Transfer credit already exists: *(See **bctransferguide.ca**.)*

☐ No ☒ Yes

Submit outline for (re)articulation:

☐ No ☐ Yes *(If yes, fill in transfer credit form.)*

Grading System

☒ Letter Grades ☐ Credit/No Credit

Maximum enrolment (for information only): 36

Expected Frequency of Course Offerings:

Every semester

Department / Program Head or Director: Zoe Dennison	**Date approved:**	May 2021
Faculty Council approval	**Date approved:**	June 4, 2021
Undergraduate Education Committee (UEC) approval	**Date of meeting:**	October 1, 2021

Learning Outcomes:

Upon successful completion of this course, students will be able to:

1. Employ basic descriptive statistics, graphs, and tables to summarize behavioural and psychological data.
2. Describe the properties, uses, and limitations of differing measurement scales.
3. Employ basic discrete and continuous probability concepts.
4. Explain the role of sampling distributions in the logic of inferential statistics.
5. Apply the logic of null hypothesis testing by translating psychological research questions into testable research hypotheses.
6. Interpret the meaning of a p-value with respect to rejection or non-rejection of a null hypothesis.
7. Perform appropriate statistical hypothesis tests on behavioural and psychological data using z-, t-, and chi-square distributions.
8. Interpret calculated effect sizes and confidence intervals.

Prior Learning Assessment and Recognition (PLAR)

☒ Yes ☐ No, PLAR cannot be awarded for this course because

Typical Instructional Methods *(Guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion.)*

This course is primarily lecture based. This course may also be offered in online or hybrid format.

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Text(s) and Resource Materials *(If more space is required, download Supplemental Texts and Resource Materials form.)*

	Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1.	Gravetter & Wallnau	Essentials of Statistics for the Behavioural Sciences	☒	Cengage	
2.	Foster G.C., et. al	Introduction to Psychological Statistics	☒	Open Educational Resources Collection	
3.			☐		

Required Additional Supplies and Materials *(Software, hardware, tools, specialized clothing, etc.)*

None

Typical Evaluation Methods and Weighting

Final exam:	25%	Assignments:	40%	Field experience:	%	Portfolio:	%
Midterm exam:	25%	Project:	%	Practicum:	%	Other:	%
Quizzes/tests:	10%	Lab work:	%	Shop work:	%	Total:	100%

Details (if necessary): Exams: (not cumulative) 2 x 25% = 50% Assignments 2 x 20% = 40% Chapter quizzes = 13 x ~1% = 10%

Typical Course Content and Topics

- Basic statistical concepts; notation and summation
- Measurement
- Descriptive statistics part I (frequency distributions and measures of central tendency)
- Descriptive statistics part II (measures of dispersion, covariance, correlation) and linear transformation
- Probability for discrete variables
- Probability for continuous variables
- Sampling distributions and the sampling problem
- The logic of Neyman-Pearson null hypothesis testing
- One-sample mean test (z- and t- test)
- Two-sample mean test (dependent and independent)
- Correlation t-test
- Chi-square test