NORTHWESTERN POLYTECHNIC

KINESIOLOGY AND HEALTH SCIENCES

COURSE OUTLINE – Winter 2026

PE1090 (A3/L1): Statistics, Measurement, & Evaluation – 3 (3-0-1) 60 Hrs for 15 Wks

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

INSTRUCTOR:	Lorelle Warr	**PHONE:**	780-539-2978
OFFICE:	K218	**E-MAIL:**	lwarr@nwpolytech.ca
OFFICE HOURS:	By appointment		
LAB INSTRUCTOR:	Brendan Shaffick	**PHONE:**	780-539-2990
OFFICE:	K217	**E-MAIL:**	bshaffick@nwpolytech.ca
OFFICE HOURS:	By appointment		

CALENDAR DESCRIPTION: This course will introduce students to the concepts of validity and reliability as they apply to quantitative research, measurement and evaluation in physical education, sport, exercise science, and leisure contexts. The course will focus primarily on inferential statistical procedures that are used to organize, summarize, and interpret information.

PREREQUISITE(S): None

COREQUISITE(S): None

REQUIRED MATERIALS:

Goss-Sampson, M. A. (2025). Statistical analysis in JASP: A guide for students (7th ed., v. 0.19.3). https://jasp-stats.org/wp-content/uploads/2025/07/Statistical-Analysis-in-JASP-A-guide-for-students-2025.pdf.

OpenStax. (2023). *Introductory statistics (2nd ed).* https://openstax.org/details/books/introductory-statistics-2e?Book%20details.

DELIVERY MODE(S): This is an in-person course. This course will be delivered via lectures, class discussions, group work, in-class activities, and individual student work that includes various delivery methods.

LEARNING OUTCOMES:

1. Students will demonstrate statistical thinking by running basic descriptive and inferential statistical tests.
2. Students will demonstrate conceptual understanding of statistical tests through interpretation and application of results.
3. Students will utilize technology to explore and analyze datasets.
4. Students will define the concepts of reliability and validity as related to statistical testing.

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check the transferability of this course at the Alberta Transfer Guide main page http://www.transferalberta.alberta.ca.

** For courses with alpha (letter) grading, a grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. **Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability.**

EVALUATIONS:

Labs	See myClass for due dates	5%
Midterm	Feb 11th in class	20%
Lab Midterm	Feb 13th in Lab (50mins)	15%
Project	Apr 13th	15%
Lab Final	Apr 10th in Lab (50mins)	20%
Final Exam	TBD (2 hours)	25%
	Total	100%

GRADING CRITERIA:

Please note that most institutions will not accept your course for transfer credit **IF** your grade is **less than C-**.

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Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	95-100	C+	2.3	67-69
A	4.0	85-94	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:
Lecture (E306): Mondays & Wednesdays 8:30am-9:50am

Labs (E306): Fridays 10:00am-10:50am

Date	Mondays (Lecture)	Wednesdays (Lecture)	Friday (Lab)
Jan 5-9		Course Introduction	Lab 0: JASP
Jan 12-16	Descriptive Statistics	Descriptive Statistics	Lab 1: Cleaning Data
**Thurs Jan 15th – Add/Drop Deadline			
Jan 19-23	Probability	Probability	Lab 1: Cleaning Data
Jan 26-30	Normal Distribution	Normal Distribution	Lab 2: Descriptives
Feb 2-6	Hypothesis Testing	One Sample t-tests	Lab 3: One Sample t-tests
Feb 9-13	One Sample t-tests	Midterm	Lab Midterm
Feb 16-20	Winter Break – No Classes		
Feb 23-27	Independent t-tests	Independent t-tests	Lab 4: Independent t-tests
Mar 2-6	Dependent t-tests	Dependent t-tests	Lab 5: Dependent t-tests
Mar 9-13	Between Groups ANOVA	Between Groups ANOVA	Lab 6: Between Groups ANOVA
Mar 16-20	Repeated Measures ANOVA	Correlation & Regression	Lab 7: Repeated Measures ANOVA
Mar 23-27	Correlation & Regression	Chi Square	Lab 8: Correlation & Regression
Mar 30- Apr 3	Chi Square	Lab 9: Chi Square	Good Friday
**Tues Mar 31st – Last Day to Withdraw			
Apr 6-10	Project Work	Project Work	Lab Final
Apr 13-17	Project Work & Review		

This schedule is subject to change based on how we progress as a class. Changes will be announced in class and on myClass.

STUDENT RESPONSIBILITIES:

Attendance: Regular attendance is a key to success in this and every other course. Please contact the instructor if you must miss class. It is the student's responsibility to acquire any materials and content missed due to absence.

Labs: Labs are designed as an active work time for the lab assignments with the instructor present to answer questions. These assignments are designed to prepare you for the lab midterm and lab final exams.

Late Assignments: Late assignments will be deducted 10% for each day late, including weekends. Project guidelines will be discussed in class.

Unforeseen Circumstances: If you have a significant issue or concern (e.g., illness or family emergency), contact the instructor as soon as possible.

Cell Phones: The personal use of cell phones during class time is unprofessional and distracting to the instructor and fellow students. Texting and talking on a cell phone during class is therefore strictly prohibited.

STATEMENT ON ACADEMIC MISCONDUCT:

Academic Misconduct will not be tolerated. For a more precise definition of academic misconduct and its consequences, refer to the Student Rights and Responsibilities policy available https://www.nwpolytech.ca/about/polytechnic-leadership/policies-directory.

**Note: all Academic and Administrative policies are available on the same page.