

KINESIOLOGY AND HEALTH SCIENCES

COURSE OUTLINE – Winter 2024

PE1090 (A3/L1/L2): Measurement, Statistics and Evaluation – 3 (3-0-1) 60 Hours for 15 Weeks

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: K215 **E-MAIL:** lwarr@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)/COREQUISITE: None

REQUIRED TEXT/RESOURCE MATERIALS:

Goss-Sampson, M. A. (2022). Statistical analysis in JASP: A guide for students (v. 0.16). <https://jasp-stats.org/wp-content/uploads/2022/04/Statistical-Analysis-in-JASP-A-Students-Guide-v16.pdf>

OpenStax. (2013). *Introductory statistics*. www.openstax.org/details/introductory-statistics

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 to ensure the transferability of this course at the Alberta Transfer Guide main page <http://www.transferralberta.ca>.

**** 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:

Midterm	Feb 13	20%
Project	Apr 11	20%
Labs	See schedule below	30%
Final Exam	TBD	30%
Total		100%

GRADING CRITERIA:

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

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

STUDENT RESPONSIBILITIES:

- 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. If a student misses more than 5 classes, they may not be allowed to take the midterm and/or the final exam.
- Lab attendance is mandatory. Failure to attend lab will result in a 0 for the missed lab unless the instructor has given prior permission. Labs must be submitted online by the posted due date & time and will be deducted 10% for each day late, including weekends. Students may resubmit one lab of their choice. This must be submitted online by the posted due date. No late re-submissions will be allowed.
- Late projects will be deducted 10% for each day late, including weekends. Project guidelines will be discussed in class and posted on myClass.
- If you have a significant issue or concern (e.g., illness or family emergency), contact the instructor as soon as possible.

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 at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

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

COURSE SCHEDULE/TENTATIVE TIMELINE:

Lecture: Tuesday & Thursday: 10:00-11:20am (E306)

Labs: Friday (E306): L1 – 8:00am-8:50am & L2 – 9:00am-9:50am

Date	Tuesday (Lecture)	Thursday (Lecture)	Friday (Lab)
Jan 8-12	Course Introduction	Descriptive Statistics	No Lab
Jan 15-19	Descriptive Statistics	Probability	Lab Introduction (Lab 0)
**Jan 17 – Add/Drop Deadline			
Jan 22-26	Probability	Normal Distribution	Lab 1
Jan 29-Feb 2	Normal Distribution	Introduction to Hypothesis Testing	Lab 1
Feb 5-9	Introduction to Hypothesis Testing	Review	Lab 2
Feb 12-16	Midterm	Hypothesis Testing	Lab 2
Feb 19-23	No Classes: Winter Break		
Feb 26-Mar 1	Hypothesis Testing	Hypothesis Testing	Lab 3
Mar 4-8	ANOVA	ANOVA	Lab 4
Mar 11-15	ANOVA	Correlation & Regression	Lab 5
Mar 18-22	Correlation & Regression	Correlation & Regression	Lab 6
Mar 25-29	Project Planning	Project Planning (**Part 1 due, 11:59pm)	Good Friday -No Lab
**Apr 1 – Last Day to Withdraw			
Apr 1-5	Data Collection	Project Work/Review	Open Lab
Apr 8-12	Applying Statistics	Project Work/Review (**Part 2 due, 11:59pm)	Open Lab

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

Lab Due Dates

Lab	Due Date
1	Friday February 9, 11:59pm
2	Friday February 23, 11:59pm
3	Friday March 8, 11:59pm
4	Friday March 15, 11:59pm
5	Friday March 22, 11:59pm
6	Friday March 29, 11:59pm

