

**KINESIOLOGY AND HEALTH SCIENCES  
COURSE OUTLINE – Fall 2023**

**PE1090 (A2/L1): 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:** Julia Dutove, Ph.D.                      **PHONE:** 780-539-2974  
**OFFICE:** K218    **E-MAIL:** [jdutove@nwpolytech.ca](mailto:jdutove@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](http://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.transferalberta.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	Oct 10	20%
Project	Dec 7	20%
Labs	See schedule below	30%
Final Exam	TBD (Dec 14-21)	30%
<b>Total</b>		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: 8:30-9:50am (E306)**Lab:** Monday: 10-10:50am (E306)

Date	Monday (Lab)	Tuesday (Lecture)	Thursday (Lecture)
Sept 5-7		Course Introduction	Descriptive Statistics
Sept 11-14	Lab Introduction (Lab 0)	Descriptive Statistics	Probability
<b>**Sept 13 – Add/Drop Deadline</b>			
Sept 18-20	Lab 1	Probability	Normal Distribution
Sept 25-28	Lab 1	Normal Distribution	Introduction to Hypothesis Testing
Oct 2-5	Lab 2	Introduction to Hypothesis Testing	Review
Oct 9-13	No Classes: Thanksgiving	Midterm	Hypothesis Testing
Oct 16-19	Lab 2	Hypothesis Testing	Hypothesis Testing
Oct 23-26	Lab 3	ANOVA	ANOVA
Oct 30-Nov 2	Lab 4	ANOVA	Correlation & Regression
Nov 6-9	Lab 5	Correlation & Regression	Correlation & Regression
Nov 13-16	No Classes: Fall Break		
Nov 20-23	Lab 6	Project Planning	Project Planning (**Part 1 due, 11:59pm)
<b>**Nov 25 – Last Day to Withdraw</b>			
Nov 27-30	Open Lab	Data Collection	Project Work/Review
Dec 4-7	Open Lab	Applying Statistics	Project Work/Review (**Part 2 due, 11:59pm)
Dec 11-12	No Lab	Review	
Dec 14-21	Final Exam		

*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	Monday October 2, 11:59pm
2	Monday October 23, 11:59pm
3	Monday October 30, 11:59pm
4	Monday November 6, 11:59pm
5	Monday November 20, 11:59pm
6	Monday November 27, 11:59pm
Resubmission	Monday December 11, 11:59pm