

KINESIOLOGY AND HEALTH SCIENCES

COURSE OUTLINE – Winter 2025

PE1090 (A3): 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:	warr@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. (2022). *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.transferalberta.alberta.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	February 13 th in class	20%
Project*	Part 1: March 27 th	1%
	Part 2: April 10 th	14%
Labs	See schedule below	5%
Lab Midterm	Feb 28 th in Lab (50mins)	15%
Lab Final	April 11 th in Lab (50mins)	20%
Final Exam	TBD (2 hours)	25%
Total		100%

*Attendance at the Data Collection Day is mandatory for the project, as required by Research Ethics Board (REB) approval stipulations. Failure to attend will result in a grade of 0 for the project.

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

COURSE SCHEDULE/TENTATIVE TIMELINE:

Lecture (A313): Tuesdays & Thursdays 10:00am-11:30am

Labs (G111): L1 Mondays 11:30am-12:20pm; L2 Fridays 8:30am-9:20am

Date	Tuesday (Lecture)	Thursday (Lecture)	Labs
Jan 6-10	Course Introduction	Descriptive Statistics	Lab 0: JASP
Jan 13-17	Descriptive Statistics	Probability	Lab 1: Cleaning Data
**Jan 15th – Add/Drop Deadline			
Jan 20-24	Probability	Normal Distribution	Lab 1: Cleaning Data
Jan 27-31	Normal Distribution	Hypothesis Testing Intro	Lab 2: Descriptives
Feb 3-7	Hypothesis Testing Intro	Hypothesis Testing	Lab 3: Variability & z-scores
Feb 10-14	Review	Midterm	Lab 3: Variability & z-scores
Feb 17-21	No Classes: Winter Break		
Feb 24-28	Hypothesis Testing	Hypothesis Testing	Lab Midterm
Mar 3-7	Hypothesis Testing	ANOVA	Lab 4: Independent t-tests
Mar 10-14	ANOVA	ANOVA	Lab 5: Dependent t-tests
Mar 17-21	Correlation & Regression	Correlation & Regression	Lab 6: Between Groups ANOVA
Mar 24-28	Project Planning	Project Planning (**Part 1 due, 11:59pm)	Lab 7: Repeated Measures ANOVA
Mar 31-Apr 4	Data Collection (A313)	Project Work & Review	Lab 8: Correlation & Regression
**Mar 31st – Last Day to Withdraw			
Apr 7-11	Project Work & Review	Applying Statistics (**Part 2 due, 11:59pm)	Lab Final

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

All labs are due @ 11:59pm MST on their due date.

Lab	Monday (L1) Due Dates	Friday (L2) Due Dates
1	Sunday January 26 th	Thursday January 30 th
2	Sunday February 2 nd	Thursday February 6 th
3	Sunday February 16 th	Thursday February 20 th
4	Sunday March 9 th	Thursday March 13 th
5	Sunday March 16 th	Thursday March 20 th
6	Sunday March 23 rd	Thursday March 27 th
7	Sunday March 30 th	Thursday April 3 rd
8	Sunday April 6 th	Thursday April 10 th

STUDENT RESPONSIBILITIES:

- **Regular attendance** is essential for success in this and all other courses. If you must miss class, please contact the instructor in advance or as soon as possible. It is your responsibility to obtain any materials or content missed during your absence. **If you miss more than 7 classes, you may be debarred from writing the final exam.** Please refer to Debarred Exams section of the Final Examination Policy for further details.
- Labs are structured as active work sessions where you will complete lab assignments with the instructor available to provide support and answer questions. These assignments are specifically designed to prepare you for the lab exams.
- **Late projects** will be penalized 10% per day for up to 4 days, including weekends, or until the scheduled final exam, whichever comes first. After this period, projects will not be accepted.
- If you encounter a significant issue or concern (e.g., illness or family emergency), please contact the instructor as soon as possible to discuss potential accommodations or solutions.

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>.

Exams administered online through myClass will be monitored using AB Tutor, a screen monitoring software.

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