

DEPARTMENT of Science

COURSE OUTLINE – Winter 2026

ST1510 (B3): Introduction to Applied Statistics I – 3 (3-0-2) 75 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: James Iverson **PHONE:** 780-539-2850
OFFICE: C407 **E-MAIL:** jiverson@nwpolytech.ca
10:00-10:50 Monday and Wednesday, 12:00-12:50 Tuesday and
OFFICE HOURS: Thursday or by appointment.

CALENDAR DESCRIPTION: The course includes data collection and presentation, descriptive statistics. Probability distributions, sampling distributions, and the central limit theorem; point estimation and hypothesis testing; correlation and regression analysis; goodness of fit and contingency table.

PREREQUISITE(S): Mathematics 30-1 or equivalent or Mathematics 30-2 or equivalent

REQUIRED MATERIALS:

Open (free) textbook: Introductory Statistics, Current Edition (by Illowsky, Dean, openstax). Textbook is found on myclass.

DELIVERY MODE(S):

Lecture: B3 10:00 – 11:20 T & R (Room A307)
Lab: BL1 14:30 – 16:20 M (Room H211)
BL2 14:30 – 16:20 W (Room E305)

LEARNING OUTCOMES:

To demonstrate the basic knowledge of descriptive statistics and its use. To perform elementary analysis of research data and to interpret the results of statistical tests. To demonstrate a conceptual knowledge of the concepts and principles involved. To select the appropriate statistical test. To be able to enter and analyze data using the computer program EXCEL.

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:

Assignments & Quizzes 10%

Lab Reports 10%

Midterms 2 × 20% (Tentatively Week 6 and Week 11)

Lab Exam 10% (Week 13: Monday April 6 and Wednesday April 8)

Final Exam 30% (Cumulative, during exam period)

GRADING CRITERIA:

Please note that most institutions 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:

Weeks	Chapters
Week 1 (Jan 6, 8)	Chapter 1: Sampling and Data
Week 2 (Jan 13, 15)	Chapter 2: Descriptive Statistics
Week 3 (Jan 20, 22)	Chapter 2: Descriptive Statistics
Week 4 (Jan 27, 29)	Chapter 3: Probability Topics
Week 5 (Feb 3, 5)	Chapter 4: Discrete Random Variables
Week 6 (Feb 10, 12)	Chapter 5: Continuous Random Variable Chapter 6: The Normal Distribution
Week 7	Winter Break
Week 8 (Feb 24, 26)	Chapter 7: The Central Limit Theorem
Week 9 (Mar 3, 5)	Chapter 8: Confidence Intervals
Week 10 (Mar 10, 12)	Chapter 9: Hypothesis Testing with One Sample
Week 11 (Mar 17, 19)	Chapter 10: Hypothesis Testing with Two Samples
Week 12 (Mar 24, 26)	Chapter 11: The Chi-Square Distribution
Week 13 (Mar 31, Apr 2)	Chapter 12: Linear Regression and Correlation
Week 14 (Apr 7, 9)	Chapter 13: F Distribution and One-Way ANOVA
Week 15	Final exam

STUDENT RESPONSIBILITIES:

The following guidelines will maintain an effective learning environment for everyone. We ask the cooperation of all students in the following areas of the classroom environment.

1. Take responsibility for your learning.
2. Attendance: Regular attendance and class participation is expected of all students and is crucial to good performance in the course.
3. Exams must be written on the days announced in class.
4. If an emergency prevents attendance on an exam day, students must contact me before the end of the exam (as soon as possible) via phone or email, students may be asked to provide documentation to justify their absence.

5. No unspecified electronic devices will be permitted during exams. This includes phones, smartwatches, smartglasses etc.
6. Complete daily homework. Students are expected to practice the material by doing problems from the textbook.
7. Behaviors that interfere with learning are not acceptable.
8. Communicate all requests regarding appointments, etc. via email.

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.