

DEPARTMENT SCIENCE

COURSE OUTLINE – Winter 2023

ST2520 (A3): Introduction to Applied Statistics II – 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: Therar Kadri **PHONE:** (780) 539-3278
OFFICE: J209 **E-MAIL:** TKadri@NWPolytech.ca
OFFICE HOURS: M&T 1:00 PM -3:00 PM – R 1:00 PM -2:30 PM

CALENDAR DESCRIPTION:

Methods in applied statistics including regression techniques, analysis of variance and covariance, and methods of data analysis. Applications are taken from Biological, Physical and Social Science and Business.

PREREQUISITE(S)/COREQUISITE: Prerequisites: ST1510 or equivalent

REQUIRED TEXT/RESOURCE MATERIALS:

The Statistical Sleuth: A Course in Methods of Data Analysis (3rd ed) Ramsey/Schafer

DELIVERY MODE(S):

Lecture:	A3	M W	10:00 – 11:20	J228
Lab:	AL1	F	14:30 – 16:20	A312

COURSE OBJECTIVES:

To learn methods in applied statistics including regression techniques, analysis of variance and covariance, and methods of data analysis. SPSS will be used as a tool to aid in this learning process. Applications are taken from Biological, Physical and Social Sciences, and Business.

LEARNING OUTCOMES:

The student should be able to demonstrate knowledge of the course objectives describe above.

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:

Assignments 10%:

Lab Reports 10%

Midterms 2 × 20% (Tentatively Week 5: Thur Feb 2, Week 10: Thur Mar 16)

Lab Exam 10% (AL1 Wed Apr 5)

Final Exam 30% (Cumulative, during exam period Apr 17 - Apr 24)

GRADING CRITERIA: (The following criteria may be changed to suite the particular course/instructor)

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	90-100		C+	2.3	67-69
A	4.0	85-89		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	Topic
Week 1 (Jan 4)	Ch 1	Review, Intro + Design Concepts
Week 2 (Jan 9,11)	Ch 2	One or Two Population Means
Week 3 (Jan 16,18)	Ch 2	One or Two Population Means

Week 4 (Jan 23,25)	Ch 3	One or Two Population Means
Week 5 (Jan 30, Feb 1)	Ch 5	Several Population Means
Week 6 (Feb 6,8)	Ch 6	Several Population Means
Week 7 (Feb 13,15)	Ch 7	Simple Linear Regression
Winter Break (Feb20-24)		
Week 8 (Feb 27, Mar 1)	Ch 8	Simple Linear Regression
Week 9 (Mar 6,8)	Ch 9,10	Multiple Linear Regression
Week 10 (Mar 13,15)	Ch 11,12	Multiple Linear Regression
Week 11 (Mar 20,22)	Ch 13	Two-Factor ANOVA
Week 12 (Mar 27,29)	Ch 13	Two-Factor ANOVA
Week 13 (Apr 3,5)	Ch 4	Non-Parametric tests
Week 14 (Apr 10,12)	Ch 4	Non-Parametric tests

STUDENT RESPONSIBILITIES:

Students are responsible for all lecture material, labs and readings. Students are expected to practice the material by doing problems from the textbook. Assignments are not accepted if handed in late. If a midterm is missed due to illness the weight will be put on the next midterm or the final. If the final is missed due to illness it will be deferred (see calendar for information). A doctor's note and a phone message or email will be required in both cases.

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the Northwestern Polytechnic Calendar at <https://www.nwpolytech.ca/programs/calendar/> or the Student Rights and Responsibilities policy which can be found at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

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