DEPARTMENT OF NURSING EDUCATION & HEALTH STUDIES

COURSE OUTLINE – Fall 2022

NS2115 (A2): Statistics and Knowledge Management– 3 (3-0-0) 45 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:	Tom McLeister	**PHONE:**	(780) 539-2961
OFFICE:	J212	**E-MAIL:**	tmcleister@nwpolytech.ca
OFFICE HOURS:	MTRF 10:00 AM -11:00 AM		

CALENDAR DESCRIPTION:

An introduction to reading, understanding and interpreting commonly used statistics in published health sciences research. The course provides a hands-on approach to understanding measurement, sampling, and statistical analysis techniques commonly used in health care research. It introduces the concepts of information literacy, health data and big data in electronic datasets and the statistical techniques used to interpret these data in meaningful ways. Note: Available only to Nursing Students in the Collaborative program

REQUIRED TEXT/RESOURCE MATERIALS:

Open (free) textbook at www.lyryx.com: Introductory Statistics, Current Edition (by

- Illowsky, Dean, openstax) (Click here to go to download page!)

DELIVERY MODE(S):

Lecture: **A2**   **F**   **14:30 – 17:20**   **Room HEC203**

COURSE OBJECTIVES:

This course provides an introduction to statistical methods and their applications. The main topics are: obtaining and summarizing data with graphs and numeric measures; probability theory; and statistical inference (drawing conclusions from sample data by carrying out a hypothesis test).

LEARNING OUTCOMES:
- Identify and explain levels of measurement and descriptive statistics (measures of central tendency, measures of dispersion).
- Interpret results of parametric and non-parametric tests.
- Interpret statistical results presented in graphs and tables, including meta-analysis.
- Apply sampling and probability theories to the interpretation of health/related research.
- Understand and interpret the significance and magnitude of measures of association.

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:

Assignments:	10%
Quizzes:	10%
Midterms:	2 × 20% (Tentatively Oct 21, Nov 18)
Final:	40% (During the exam period Dec 14—22 inclusive)

Note: There will be no make-up quizzes or exams. If a quiz/test is missed for a valid reason and proper documentation is provided, then the weight of the quiz/test will be transferred to another component. Late assignments will not be accepted.

It is the student's responsibility to be available to write the final exam at the scheduled time. Writing early is not permitted.

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	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:

Chapters 1,2   Sampling, Experiments, Graphs, Measures of Central Tendency and Spread
Chapters 3-7   Probability, Probability Distributions, Binominal, Normal, Sampling Distribution of $\bar{x}$. Central Limit Theorem
Chapter 8   Confidence Intervals
Chapter 9-11   Hypothesis Tests about the Mean, Two Populations, Chi-square
Chapter 12   Linear Regression, Correlation, Inference about *B*
Chapter 13   ANOVA

STUDENT RESPONSIBILITIES:

Attend all lectures and seminars. If a lecture is missed, it is the student's responsibility to catch up on the material and obtain the missing lecture notes.

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 College Calendar at https://www.nwpolytech.ca/programs/calendar/ or the College Policy on Student Misconduct: Plagiarism and Cheating at https://www.nwpolytech.ca/about/administration/policies/index.html

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