

## DEPARTMENT NURSING EDUCATION & HEALTH STUDIES

### COURSE OUTLINE – Fall 2022

#### **NS2115 (B2): 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:** Therar Kadri                      **PHONE:** (780) 539-3278  
**OFFICE:** J209                                      **E-MAIL:** [TKadri@NWPolytech.ca](mailto:TKadri@NWPolytech.ca)  
**OFFICE HOURS:** T-R 10:00 AM -11:00 AM & 1:00 PM -2:00 PM

#### **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](http://www.lyryx.com): Introductory Statistics, Current Edition (by

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

#### **DELIVERY MODE(S):**

**Lecture:**                      **B2**      **M**                      **2:30 – 5:20**                      **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% (Weeks 5 and 10)
Final:	40% (Dec 14-22)

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: (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:**

<b>Weeks</b>	<b>Chapters</b>
<b>Week 1 (Sept 5)</b>	<b>Labor Day (no classes)</b>
<b>Week 2 (Sept 12)</b>	<b>Chapter 1: Sampling and Data</b>
<b>Week 3 (Sept 19)</b>	<b>Chapter 2: Descriptive Statistics</b>
<b>Week 4 (Sept 26)</b>	<b>Chapter 4: Discrete Random Variables</b>
<b>Week 5 (Oct 3)</b>	<b>Chapter 6: The Normal Distribution</b>
<b>Fall Break (Oct 10)</b>	
<b>Week 6 (Oct 17)</b>	<b>Chapter 6: The Normal Distribution</b>
<b>Week 7 (Oct 24)</b>	<b>Chapter 7: The Central Limit Theorem</b>
<b>Week 8 (Oct 31)</b>	<b>Chapter 8: Confidence Intervals</b>
<b>Week 9 (Nov 7)</b>	<b>Chapter 8: Confidence Intervals</b>
<b>Week 10 (Nov 14)</b>	<b>Chapter 9: Hypothesis Testing with One Sample</b>
<b>Week 11 (Nov 21)</b>	<b>Chapter 10: Hypothesis Testing with Two Samples</b>
<b>Week 12 (Nov 28)</b>	<b>Chapter 11: The Chi-Square Distribution</b>
<b>Week 13 (Dec 5)</b>	<b>Chapter 12: Linear Regression and Correlation</b>
<b>Week 14 (Dec 12)</b>	<b>Chapter 13: F Distribution and One-Way ANOVA</b>

**STUDENT RESPONSIBILITIES:**

Attend all lectures and seminars. If a lecture or seminar 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 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.