

## DEPARTMENT OF NURSING EDUCATION AND HEALTH STUDIES

### COURSE OUTLINE – Fall 2022 & Winter 2023

NS2160A & NS2160B (YA2 YB2): Pathophysiology and Pharmacology II– 6 (3-0-0) 90 Hours/30 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.

<b>COURSE LEADER:</b> Eleni Hansen, MN, RN, IBCLC			
<b>INSTRUCTOR:</b>	Dr. Sean Irwin PhD (Pathophysiology)	<b>INSTRUCTOR:</b>	Eleni Hansen MN, RN, IBCLC (Pharmacology)
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### CALENDAR DESCRIPTION:

The course explores selected episodic and chronic health alterations and the related pharmacological concepts. The focus is on applying foundational knowledge of pathophysiology and pharmacology to evidence-informed nursing practice. Available only to nursing students in the Collaborative Nursing Program.

**PREREQUISITE(S):** NS1160

**COREQUISITE:** NS2200, NS2210

### REQUIRED TEXT/RESOURCE MATERIALS:

Lilley, L.L., Rainforth-Collins, S., Snyder, J.S. & Swart, B. (2021). *Pharmacology for Canadian health care practices* (4th Canadian ed.). Elsevier. ISBN 978-0-323-08789-6

Hannon, R.A. and Porth, C.M. (2017). *Porth Pathophysiology: Concepts of altered health states* (2nd Canadian ed.). Wolters Kluwer. ISBN 97845119896

Understanding Alberta's Drug Schedules:

<https://pharmacists.ab.ca/nPharmacistResources/ABDrugSchedules.aspx>

Any current drug handbook or drug handbook software for a PDA or the electronic "Compendium of Pharmaceuticals and Specialties (e-CPS): (available at through the library).

<https://www.etherapeutics.ca/home.whatsnew.action>

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

Lecture

### **LEARNING OUTCOMES:**

1. Link knowledge of anatomy and physiology to pathophysiological and pharmacotherapeutic concepts.
2. Demonstrate theoretical understanding of pharmacokinetic and pharmacodynamic principles.
3. Demonstrate theoretical understanding of altered physiology as it relates to changes in health status.
4. Describe the pharmacodynamic classification, nature, properties, and effects of drugs as they relate to altered physiology.
5. Explain the relationship between pathophysiological concepts and pharmacotherapeutic concepts at a novice level.
6. Identify the nursing implications in relation to pharmacotherapeutics and pathophysiology at a novice level.
7. Apply principles of pharmacotherapeutics and pathophysiology to focused non-complex clinical examples at a novice level.
8. Predict common trajectories in pathophysiological processes at a novice level.
9. Prospectively predict common side effects of major drug classes at a novice level.

### **TRANSFERABILITY:**

#### **UofA NURS216**

\*Warning: Although we strive to make the transferability information in this document up-to-date and accurate, the student has the final responsibility for ensuring the transferability of this course to Alberta Colleges and Universities. Please consult the Alberta Transfer Guide for more information.

You may check to ensure the transferability of this course at Alberta Transfer Guide main page

<http://www.transferalberta.ca> or, if you do not want to navigate through few links, at

<http://alis.alberta.ca/ps/tsp/ta/tbi/onlinesearch.html?SearchMode=S&step=2>

**\*\* Please note that a grade less than C+ is not accepted for transfer to the U of A for NURS 216. A minimum grade of C+ is required to receive credit in NS2160.**

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:**

Exam I	20%
Exam II	25%
Exam III	20%
Final Exam	25%
<u>Quizzes &amp; In Class Activities</u>	<u>10%</u>
Total	100%

See myClass and tentative schedule for examination dates.

In class activities are to be completed and submitted in class time on the day that they are administered.

Absences without prior notice will result in a zero (0). There will be no makeup in class activities available.

**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:**

\*subject to change

Lecture Dates	Pathophysiology	Pharmacology
Sept 2 & 12	Ophthalmic & Otic 54 + 55	Chapter 57 – Ophthalmic Drugs Chapter 58 – Otic Drugs
Sept 9 & 19 Sept 16 & 26	GI 37, 38, 39	Chapter 41 - Antiemetic and Antinausea Drugs Chapter 39 - Acid-Controlling Drugs Chapter 40 - Antidiarrheals and Laxatives Chapter 42 - Nutritional Supplements
Sept 23 & Oct 3	Endocrine 41, 42	Chapter 33 – Antidiabetic Drugs Chapter 31 – Pituitary Drugs

		Chapter 32 – Thyroid and Antithyroid drugs Chapter 34 – Adrenal Drugs
Oct 7 & 17		
Reading Week		
Oct 21/24		Exam
Oct 28/31		Exam
Nov 4 & 7	CNS 1 (Motor Function) 50	Chapter 21 - Cholinergic Drugs Chapter 22 - Cholinergic blocking Drugs Chapter 16 – Antiparkinsonian Drugs Ch. 35- p.672-675 – Osteoporosis
Nov 14 & 18	CNS 2 (Brain Function) 51	Chapter 15 - Antiepileptic Drugs Chapter 18 - Substance Misuse
Nov 21 & 25	CNS 3 (Thought, Mood, & Memory) 53	Chapter 17 - Psychotherapeutics
Nov 28 & Dec 2	CNS 4 (Sleep Disorders) 52	Chapter 13 - CNS Depressants Chapter 14 - CNS Stimulants
Dec 5 & 9	Disorders of Musculoskeletal System 57-59	Chapter 12 General and Local Anesthetics
Exam in Exam Week		
Jan 6 & 9	Renal 31, 32, 33, 34, 35	Chapter 30 - Fluid and Electrolytes
Jan 13 & 16		Chapter 29 –Diuretics
Jan 20 & 23		Intro to Lab Values Canadian Manual of DI and Lab tests will be the textbook we will reference for this week.
Jan 27 & 30	Cardiac 22, 23, 24, 25, 26	Chapter 19 - Adrenergic Drugs Chapter 20 - Adrenergic Blocking Drugs Chapter 23 – Antihypertensives Chapter 24 - Antianginal Drugs
Feb 3 & 6		Chapter 25 - Heart Failure Chapter 26 – Antidysrhythmic
Feb 10 & 13		Chapter 27 - Coagulation Modifiers Chapter 28 - Antilipemic Drugs
Feb 17 & 27		Exam
Reading Break		
Mar 3 & 6		Exam
Mar 10 & 13	Disorders of Male & Female Reproductive Systems 44 & 46 Pregnancy, Development and Congenital Disorders Chapters 2 & 7	Chapter 36 Men's Health Drugs
Mar 17 & 20		Chapter 35 Women's Health Drugs
Mar 24 & 27		
Mar 31 & April 3	Cancer (Neoplasia) Chapter 8	Chapter 52 Antineoplastic Drugs Part 1 Chapter 53 Antineoplastic Drugs Part 2 Chapter 54 -Biological response anti-rheumatic Chapter 50- Immunosuppressants

**STUDENT RESPONSIBILITIES:**

Refer to the College Policy on Student Rights and Responsibilities at:

<https://www.nwpolytech.ca/about/administration/policies/fetch.php?ID=69>

For policies related to clinical absences, immunizations, uniforms, and other clinical requirements, please see the NWP Department of Nursing Education & Health Studies Student Handbook on myClass.

**LATE ASSIGNMENT POLICY:**

To obtain credit in the course ALL assignments, examinations, and quizzes must be completed. Students are expected to make every effort to complete assignments on time. Assignment submissions are expected on the date determined by faculty. If extensions are necessary, they may be requested up to 48 hours prior to the assignment due date and should be submitted in writing to the faculty member involved. Not all extensions will be granted. In exceptional situations, extension requests within the 48-hour period may be considered. Late assignments will have 5% of total marks (or one letter grade) for the assignment deducted for each day/partial day (including weekend days) beyond the due time. For example, a paper marked at B+ would receive an adjusted grade of B if handed in one day late. After 5 days, a grade of 0 will be awarded to the assignment. If the late penalty places the grade below the necessary pass grade, students will be unsuccessful in the course. When submitting assignments electronically, it is the student's responsibility to ensure the assignment has been received. Papers/assignments may not be rewritten for a higher grade. Concerns regarding grading are to be discussed with the faculty member involved.

**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.