

Department of Practical Nurse and Health Care Aide

COURSE OUTLINE – Spring 2024

NP 1600(A4): Pathophysiology and Pharmacology – 6 (6-0-0) 90 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:	Nicki Rosentreter, LPN	PHONE:	780-539-2716
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INSTRUCTOR:	Sarah Stewart, LPN	PHONE:	780-539-2894
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CALENDAR DESCRIPTION:

Exploration of disordered physiological processes associated with disease or injury and the use of medications, including indications, effects, and mechanisms of action.

Note: Available only to Practical Nursing Students

PREREQUISITE(S)/COREQUISITE:

PREREQUISITE(S): NP1205, NP1250, NP1280, NP1500

COREQUISITE(S): NP1400, NP1410, NP1450, NP1480

REQUIRED TEXT/RESOURCE MATERIALS:

Huether, S. E., McCance, K. L., El-Hussein, M., Power-Kean, K., & Zettel, S. (2023). *Understanding Pathophysiology* (2nd ed.). Elsevier.

Lilley, L. L., Swart, B., & Snyder, J. S. (2021). *Pharmacology for Canadian Health Care Practice* (4th ed.). Elsevier.

DELIVERY MODE(S): Lecture – in-person

LEARNING OUTCOMES:

Upon successful completion of NP1600 learners will be able to:

1. Apply concepts from anatomy and physiology to pathophysiological processes and pharmacotherapy.
2. Identify pathophysiological processes and pharmacotherapy interventions.
3. Describe relationships between pathophysiology and pharmacology.
4. Identify various pharmacology classifications.
5. Identify various microorganisms.
6. Describe various microorganisms and their relationship to transmission of infection and disease.

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.alberta.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:

Assignment	Weight	Date	Related Course Learning Outcome
Quizzes & In-class activities	10%	Twice weekly	1, 2, 3, 4, 5, 6
Pharm concept map	10%	Week 14	2, 4
Patho matching game	10%	Week 8	1, 2, 5, 6
Exam #1	20%	Week 5	1, 2, 3, 4, 5, 6
Exam #2	25%	Week 11	1, 2, 3, 4, 5, 6
Exam #3	25%	Week 15	1, 2, 3, 4, 5, 6



1. Quizzes and In-class activities

The material will be from the current class or before each week in both pharmacology and pathophysiology. Attendance is mandatory to receive credit for these quizzes and activities. If you are absent with advance notice and with a legitimate reason before class you will receive a partial mark at the instructor's discretion. If you do not provide advance notice of your absence you will receive a 0 for that class. The grade each class is determined by the instructor based on the activity for the class.

2. Pharm Concept Map

The objective of this assignment is to deepen your understanding of a specific drug by creating a comprehensive concept map. Construct a concept map that visually organizes the key concepts related to the chosen drug. Begin with the central node representing the drug name and branch out to include major categories such as pharmacokinetics, therapeutic uses, adverse effects, etc. Use connecting lines and arrows to illustrate relationships between different concepts.

3. Pathophysiology Matching Game

The student will design a set of a matching pair, one image, and one description of the image related to its process, relationships, anatomical structures, or pathophysiological conditions commonly encountered in nursing practice.

4. Exam #1

The first exam includes all content covered up to and including Week 4. Question format includes a variety of styles including, but not limited to multiple-choice, short answer, long answer, matching, and select all that apply. With Exam #1 you will have 2 exams one for patho and one for pharm.

5. Exam #2

The second exam includes all content covered from Week 6 up to and including Week 10. Question format includes a variety of styles including, but not limited to multiple-choice, short answer, long answer, matching, and select all that apply. With Exam #2 you will have 2 exams one for patho and one for pharm.

6. Exam #3

The third exam includes all content covered from Week 12 up to and including Week 15. Question format includes a variety of styles including, but not limited to multiple-choice, short answer, long answer, matching, and select all that apply. With Exam #3 you will have 1 exam that is split in half for patho and half for pharm

The scheduling of the final exam is set by the Registrar's Office.

GRADING CRITERIA

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Grading Chart for courses with Alpha Grading:

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:

Week	Pathophysiology chapters	Pharmacology chapters
1	Unit 1 – The cell (Chapter 1, 4) Unit 2 Mechanisms of Self-Defence (Chapter 6, 7,)	Chapter 43 Antibiotics: Part 1 Chapter 44 Antibiotics: Part 2 Chapter 45 Antiviral Drugs
2	Unit 3 Cellular Proliferation: Cancer (8, 10, 11, 12)	Chapter 46 Antitubercular Drugs Chapter 47 Antifungal Drugs Chapter 49 Anti-inflammatory and Antigout Drugs
3	No Class – May long weekend	Chapter 50- Immunosuppressants Chapter 52 Antineoplastic Drugs Part 1 Chapter 53 Antineoplastic Drugs Part 2 Chapter 54 -Biological response anti- rheumatic
4	Unit 6 The Hematological System (Chapter 21, 22)	Chapter 55 Anemia
5	Exam #1 Patho	Exam #1 Pharm
6	Unit 8 – Pulmonary System (Chapter 27, 28)	Chapter 37 Antihistamines, Decongestants and Antitussives (include Fever) Chapter 38 Drugs affecting the Respiratory System
7	Unit 11 Digestive System (Chapter 36, 37)	Chapter 39 – Acid-Controlling Drugs Chapter 40 – Antidiarrheals and Laxatives Chapter 41 – Antiemetic and Antinausea Drugs Chapter 42 – Nutritional Supplements
8	Unit 5 Endocrine System (Chapter 18, 19)	Chapter 31 – Pituitary Drugs Chapter 32 – Thyroid and Antithyroid drugs Chapter 34 – Adrenal Drugs Chapter 33 – Antidiabetic Drugs
9	****SPRING BREAK – NO CLASSES****	
10	Unit 4 Neurological Systems (Chapters 14, 15, 16)	Chapter 21 – Cholinergic Drugs Chapter 22 – Cholinergic blocking Drugs Chapter 16 – Antiparkinsonian Drugs Chapter 15 – Antiepileptic Drugs Chapter 17 – Psychotherapeutics
11	Exam #2 Patho	Exam #2 Pharm
12	Unit 12 Musculoskeletal System	Chapter 11 Analgesic Drugs

	(Chapter 39, 40)	Chapter 12 – General and Local Anaesthetics Chapter 13 – CNS Depressants and muscle relaxants Chapter 14 – CNS Stimulants and related drugs Chapter 57 – Ophthalmic Drugs Chapter 58 – Otic Drugs
13	Unit 9 Renal and Urological Systems (Chapter 30, 31) Chapter 5 Fluid & Electrolytes Acids and Bases	Chapter 30 – Fluid and Electrolytes Chapter 29 – Diuretics Chapter 19 – Adrenergic Drugs Chapter 20 – Adrenergic Blocking Drugs Chapter 23 – Antihypertensives Chapter 24 – Antianginal Drugs
14	No Class – August long weekend	Chapter 25 – Heart Failure Chapter 26 – Antidysrhythmic Chapter 27 – Coagulation Modifiers Chapter 28 – Antilipemic Drugs Chapter 36 Men's Health Drugs Chapter 35 Women's Health Drugs
15	Unit 7 Cardiovascular & Lymphatic Systems (Chapter 24) Unit 10 Reproductive Systems (Chapter 33, 34) Last day of classes	Final Exam Week August 16–22

*subject to change

STUDENT RESPONSIBILITIES:

Refer to NWP Academic Policies

<https://www.nwpolytech.ca/about/administration/policies/>

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

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

at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

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

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.

Late Assignments

To obtain credit in the course ALL assignments, examinations, and knowledge checks 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.